WM-F100II

SERVICE MANUAL

US Model
Canadian Model

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	**WM-100II/102**
Tape Transport Mechanism Type	**MF-WMF-102-01**

SPECIFICATIONS

0 dB = 0.775 V

Cassette player section

Tape track
- 4-track 2 channel stereo

Fast winding time
- Approx. 3 min. 20 sec. with Sony C-60 cassette

Frequency response (DOLBY NR off)
- 40–15,000 Hz (with the TAPE selector set to CrO_2/METAL)
- 40–15,000 Hz (with the TAPE selector set to NORM)

Radio section

Frequency range
- FM: 87.6–108 MHz
- AM: 530–1,650 kHz

Antennas
- FM: Headphones cord antenna
- AM: Built-in ferrite bar antenna

General

Power output
- 4 mW + 4 mW at DC operation (at 10% harmonic distortion)

Power requirements
- 1.5 V DC
- Size AA (R6P) battery
- Rechargeable battery
- DC IN 1.5 V jack accepts:
- Sony AC-D1M AC power adaptor (optional) for use with 120 V AC, 60 Hz
- Sony EBP-10 battery case (optional) for use on two size AA (R6P) batteries
- Sony DCC-70 car battery cord (optional) for use with 12 V car battery

Battery life (hours)

Battery	Tape playback	FM reception
Sony battery SUM-3 (NS)	Approx. 2	Approx. 10
Sony alkaline battery AM3	Approx. 5.5	Approx. 25
Sony Rechargeable battery NC-5WM (fully charged)	Approx. 2	Approx. 10

For maximum performance we recommend the use of alkaline battery.

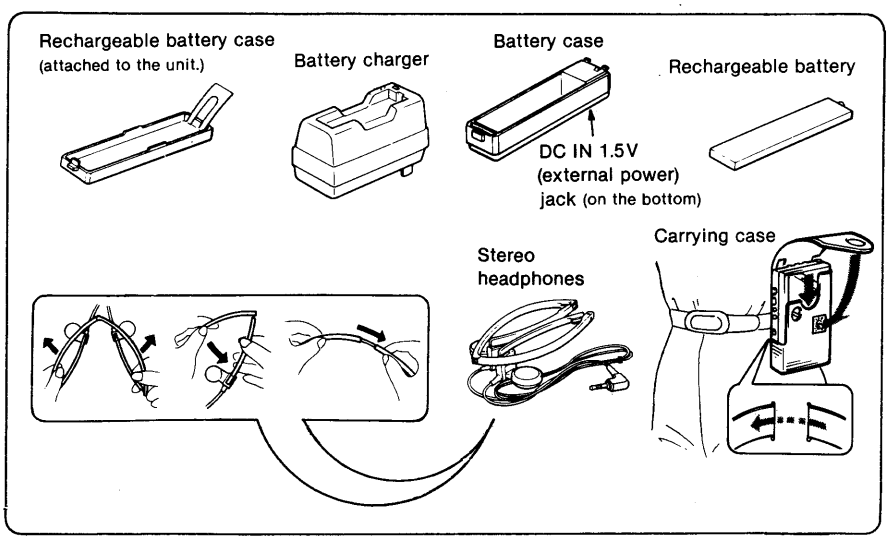
Dimensions
- not incl. projecting parts and controls
  - Approx. 69.8 × 110.8 × 21.5 mm (w/h/d) ($2^{3}/_{4} \times 4^{3}/_{8} \times {}^{7}/_{8}$ inches)
  - with rechargeable battery case attached
  - Approx. 69.8 × 119.4 × 21.5 mm (w/h/d) ($2^{3}/_{4} \times 4^{3}/_{4} \times {}^{7}/_{8}$ inches)
  - with battery case attached
- incl. projecting parts and controls
  - Approx. 74.6 × 112.6 × 23.9 mm (w/h/d) ($3 \times 4^{1}/_{2} \times {}^{31}/_{32}$ inches)
  - with rechargeable battery case attached
  - Approx. 74.6 × 121.2 × 23.9 mm (w/h/d) ($3 \times 4^{7}/_{8} \times {}^{31}/_{32}$ inches)
  - with battery case attached

Weight
- Approx. 200 g (7.1 oz) incl. rechargeable battery case and rechargeable battery not incl. other accessories
- Approx. 200 g (7.1 oz) incl. battery and battery case not incl. other accessories

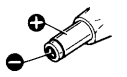
Accessories supplied
- Rechargeable battery (1)
- Battery charger (1)
- Stereo headphones (open-air type, 1)
- Rechargeable battery case (attached to the unit, 1)
- Battery case (1)
- Carrying case (1)

FM/AM STEREO CASSETTE PLAYER

SONY®



Note: Use only the recommended AC power adaptor or car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.



Polarity of the Sony plug

SERVICING NOTES

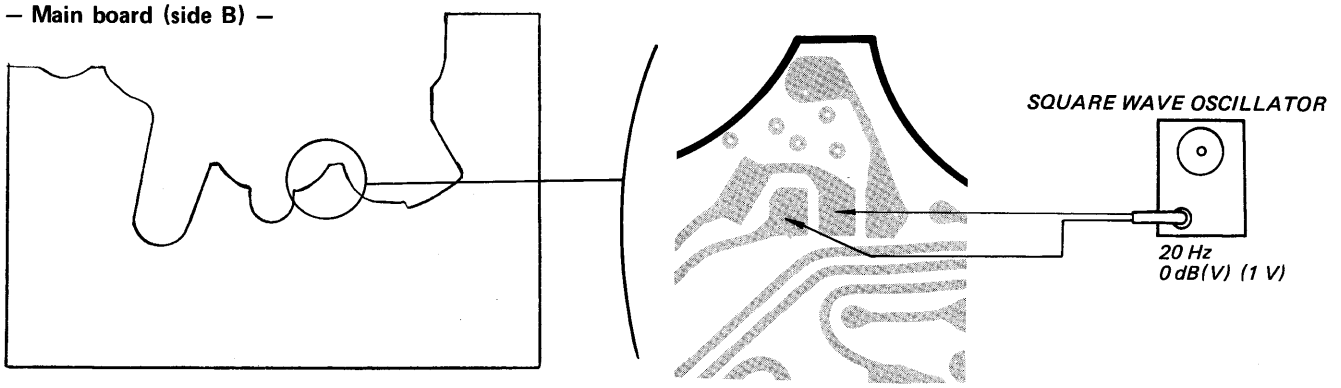
This set detects rotation of reel table by PH701 (Photo interrupter).

It cannot be detected when the main board is removed, because PH701 is mounted on the main board.

Therefore, the auto off circuit and tape end detection will misoperate.

Operation check can be done by the method shown below even when the main board is removed.

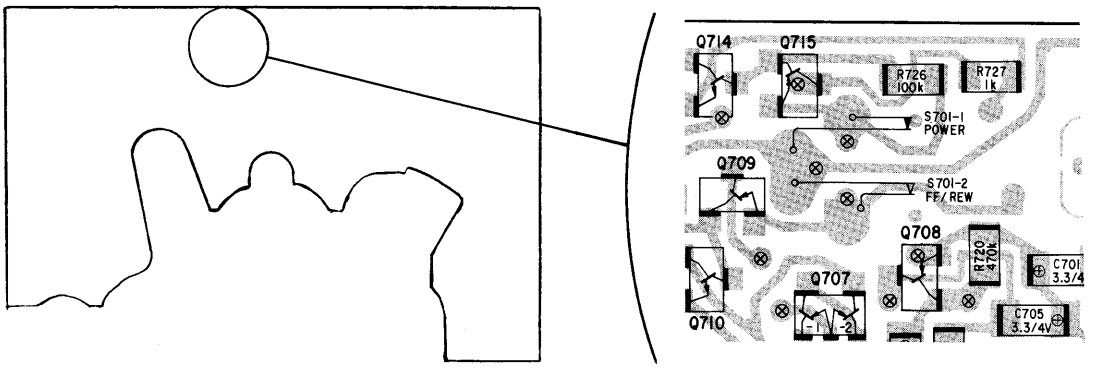
– Main board (side B) –



For PLAY, press the ▶ button and turn only the POWER switch ON.

- For FF and REW, press ▶▶ or ◀◀ button and turn both POWER switch and FF/REW switch ON.

– Main board (side A) –



Replacing chip components

All chip components should be connected and disconnected, using a tapered soldering iron [temperature of the iron tip: less than 280°C (536°F)], a pair of tweezers and braided wire.

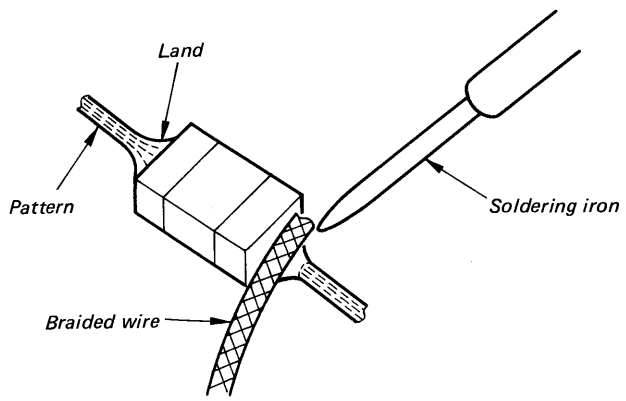
Precautions for replacement

1. **Do not disconnect the chip component forcefully. Otherwise, the pattern may peel off.**
2. **Never re-use a disconnected chip component. Dispose of all old chip components.**
3. **To protect the chip component, heating time for attaching the component should be within 3 seconds.**

○ **Removing chip components**

(1) Removing solder at electrode

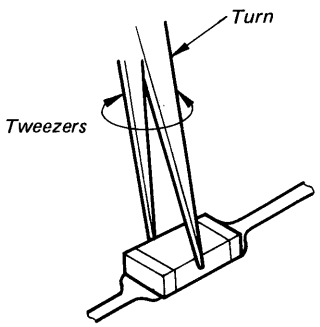
Remove the solder at the electrode, using a thin braided wire. Do not remove the solder of the part (chip component) attached adjacent to the electrode.



(2) Disconnecting chip components

Turn the tweezers with the soldering iron alternately applied to both electrodes, and the chip component will be disconnected. Take careful precautions while disconnecting, because if the chip component is forcefully removed the land may peel off.

Never re-use a disconnected chip component.



(3) Smoothing the soldered surface

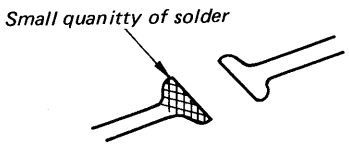
After disconnecting the chip component, remove the solder by using a braided wire to smooth the land surface.

○ **Connecting chip components**

The value of chip components is not displayed on the main body. Take due precautions to avoid mixing new chip components with other ones.

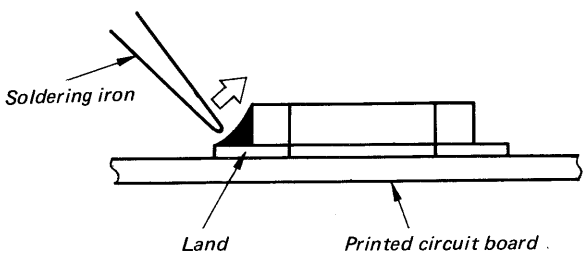
(1) Applying solder to land on one side

Apply a thin layer of solder to the land on one side where the chip component is to be connected. Too much solder may cause bridging.



(2) Speedy soldering

Hold the chip component at the desired position, using tweezers, and apply the soldering iron in the arrow-marked direction. To protect the chip component, heating time should be within 3 seconds.



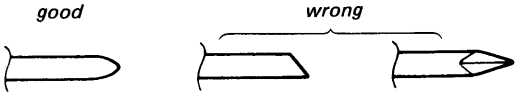
(3) Speedy soldering of electrode on the other side

Solder the electrode on the other side in the same way as in (2) above.

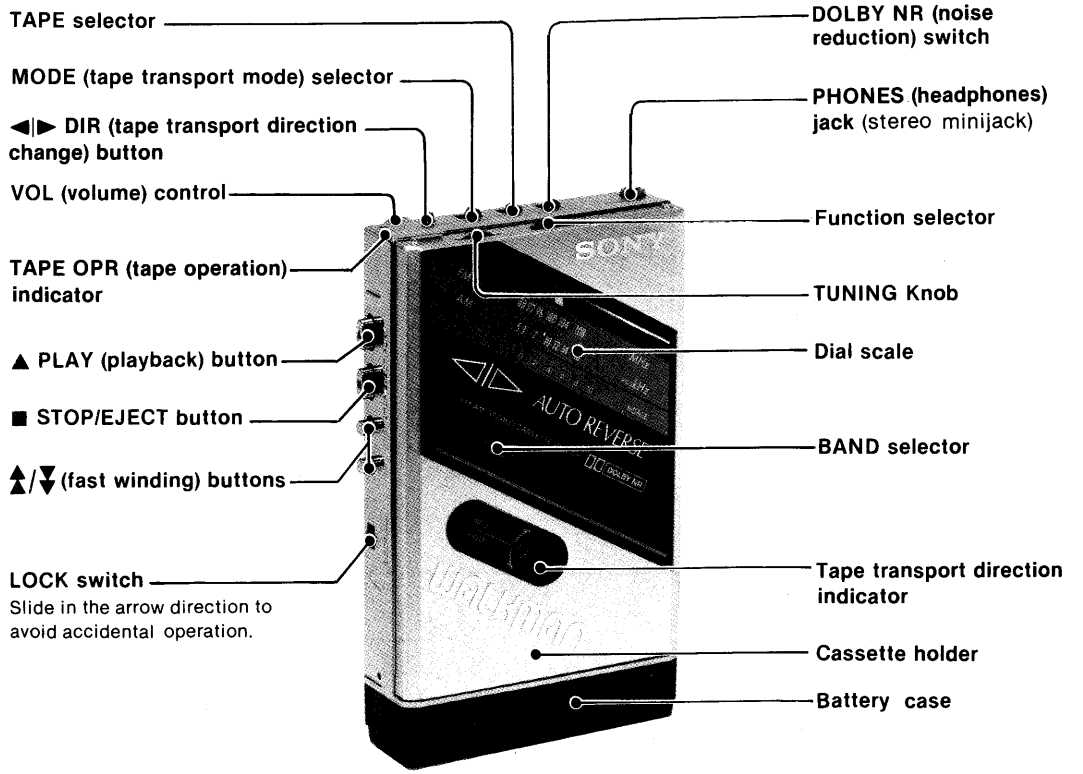
Flexible Circuit B ard Repairing

1. Keep the temperature of the soldering iron at 270° ± 10°C during repairing.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

Tip of s ldering iron



LOCATION OF CONTROLS



REVISED

REVISED

SECTION 1
BLOCK DIAGRAM

(-12) shows RADIO BOARD which suffix of -"11"or-"12".

(-13) shows RADIO BOARD which suffix of -"13".

FILTER フィルター FL1
FM RF AMP FM高周波増幅 Q1
D1
FM MIX FM混合 Q3
FM OSC FM局部発振 Q2
D2
CF1
FM IF AMP FM中間周波増幅 Q6
CF2
FM IF AMP FM中間周波増幅
AM IF AMP AM中間周波増幅
FM/AM IF AMP FM/AM中間周波増幅
LIMITER リミッター
FM DET FM検波
AM DET AM検波
AF AMP 低周波増幅
AF AMP 低周波増幅
BUFFER Q13 (-13)
FM MPX IC2
L
R
MUTING Q7
R-CH B+ (1.5V)
L11 AM FERRITE-ROD ANTENNA AMバーアンテナ
AM MIX AM混合
AM OSC AM局部発振
IC1 FM IF AMP, DET AM CONVERTER, IF AMP, DET FM中間周波増幅, 検波 AM周波数変換, 中間周波増幅, 検波
RV4 TUNING
DC-DC CONVERTER DC-DC コンバーター Q10, 11, T3
RIPPLE FILTER リップルフィルター Q12
B+ (1.15V)
D5
T2 AM OSC AM局部発振

HP101 PLAYBACK HEAD 再生ヘッド
FWD
L-CH
REV
PREAMP プリアンプ IC301
FWD/REV
NORMAL /METAL
S301 (FWD/REV) FWD REV
B+ (3V)
NORMAL METAL
S302 TAPE
DOLBY NR ドルビーNR IC302
ON/OFF
S303 DOLBY NR OFF ON
RV301-1 VOL
CURRENT STOP 逆流防止 Q301
B+ (3V)
POWER ON/OFF
MUTE
POWER AMP パワーアンプ IC303
R-CH
J301 PHONES
Q716-2 MUTING ミューティング

FM B+
AM B+
B+ (1.15V)
S2 BAND
AM FM
FM/AM B+ SWITCH FM/AM B+ スイッチ Q8, Q9-2
RADIO CONTROL SWITCH ラジオ コントロールスイッチ Q9-1
S1 FUNCTION
DX LOCAL TAPE (RADIO OFF)
B+ (END DET)
VOL. REG 定電圧 Q701, 703
Q706-1 VOL. REG SWITCH 定電圧スイッチ (RADIO: ON)
B+ (3V)
DC-DC CONVERTER DC-DC コンバーター Q802-806, T801
Q801-2 CONVERTER ON SWITCH コンバーター オン スイッチ (PLAY: ON FF, REW, RADIO: OFF)
Q801-1 CONVERTER OFF SWITCH コンバーター オフ スイッチ (FF, REW, RADIO: ON)
S701-2 FF, REW (FF, REW: ON)
S701-1 POWER (PLAY, FF REW: ON)
B+ (FF, REW)
B+ (POWER)
B+ (1.5V)
RECHARGEABLE BATTERY (NC-5WM) OR DRY BATTERY SIZE "AA" (IEC DESIGNATION R6) IPC. 1.5V ニ ケルカドミウム蓄電池 (NC-5WM) または 乾電池 SUM3x1, 1.5V

LED DRIVE LED駆動 Q303
B+ (PLAY)
D303 BATT
MOTOR DRIVE モーター駆動 Q601, 602
MOTOR DRIVE モーター駆動 Q603, 604
A
L1 L3 L5
(MOTOR COIL)
L2 L4 L6
B
MOTOR SERVO モーターサーボ IC601
H
Q719-2 MOTOR SWITCH モータースイッチ (RADIO: ON)
Q713-2 MOTOR SWITCH モータースイッチ
Q706-2 AUTO OFF PREVENTION オートオフ防止
Q708
B+ (END DET)
Q709 AUTO OFF KEEP オートオフ保持
B+ (FF, REW)
B+ (POWER)
Q711 REVERSE SWITCH リバーススイッチ
Q713-1 SOLENOID OFF SWITCH ソレノイド オフ スイッチ
Q718 DIRECTION SWITCH ディレクションスイッチ
S702 DIR
SOLENOID DRIVE ソレノイド駆動 Q714, 715
PM901 (DIRECTION)
Q719-1 SOLENOID OFF SWITCH ソレノイド オフ スイッチ (RADIO: ON)
Q702 LIMITER リミッター
Q705 AUTO OFF AMP オートオフアンプ
Q704
Q706-1 AUTO OFF SWITCH オートオフスイッチ
Q707-1 AUTO OFF TIMING オートオフタイミング
Q707-2
Q710 AUTO OFF SWITCH オートオフスイッチ
TAPE END DET テープエンド検出
PH701 ROTATION DET 回転検出

—R-CH—
SAME AS L-CH

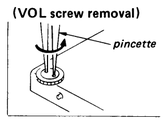
WM-F100II

SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

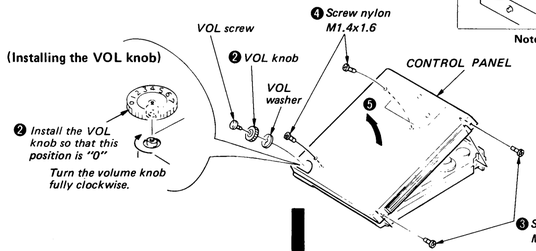
CONTROL PANEL

(VOL screw removal)



Note: *When installing the control panel, press the PLAY button and install in the reverse order given in the figure.*

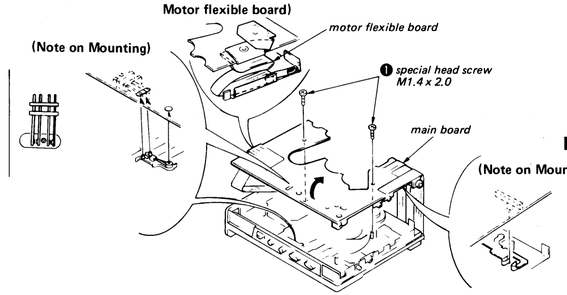
(Installing the VOL knob)



MAIN BOARD

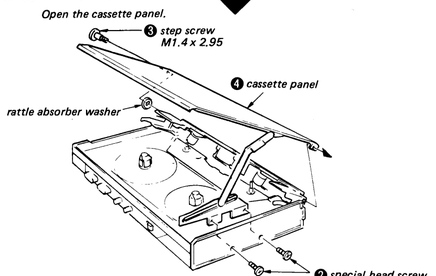
(How to handle Motor flexible board)

(Note on Mounting)

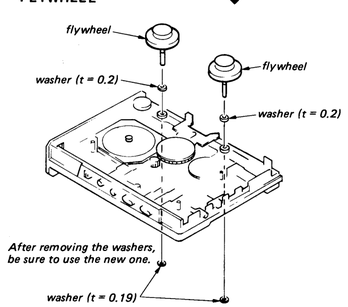


CASSETTE PANEL

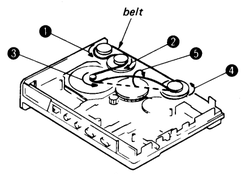
Open the cassette panel.



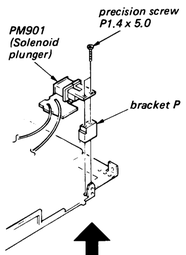
FLYWHEEL



INSTALLING THE BELT

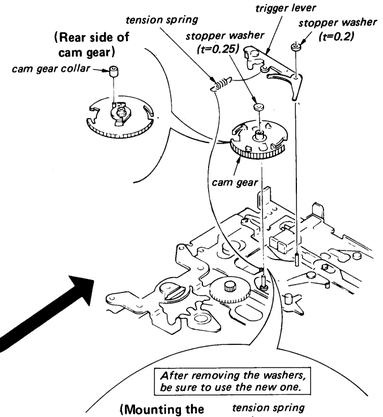


SOLENOID PLUNGER

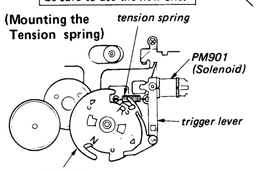


TRIGGER LEVER, CAM GEAR

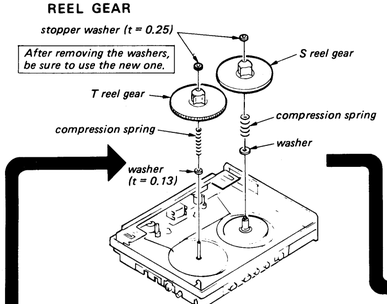
(Rear side of cam gear)



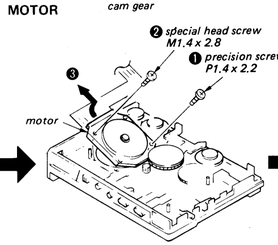
(Mounting the Tension spring)



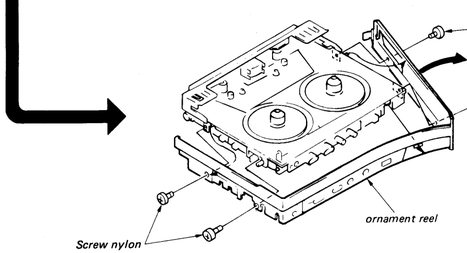
REEL GEAR



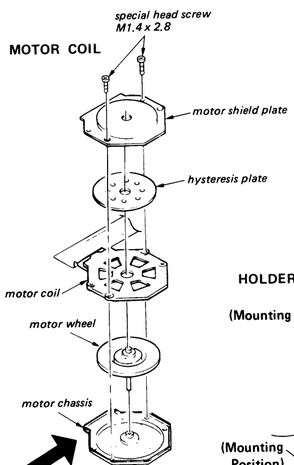
MOTOR



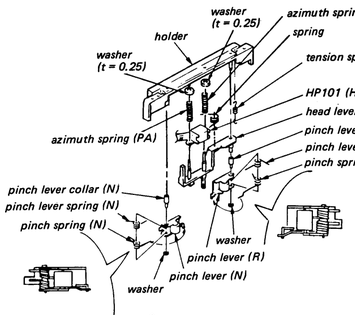
ORNAMENT REEL



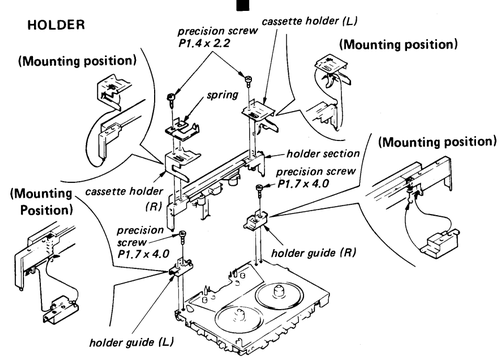
MOTOR COIL



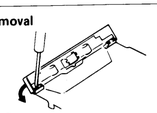
HEAD, PINCH ROLLER



HOLDER



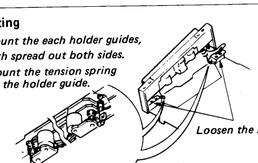
Removal



❶ *Remove the cassette holder and remove the holder guide screws.*
Remove the holder section in the direction of the arrow.

Mounting

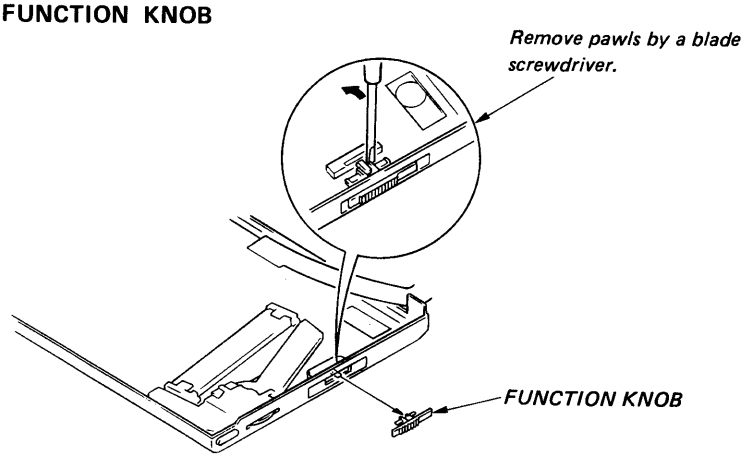
❶ *Mount the each holder guides, with spread out both sides.*
❷ *Mount the tension spring on the holder guide.*



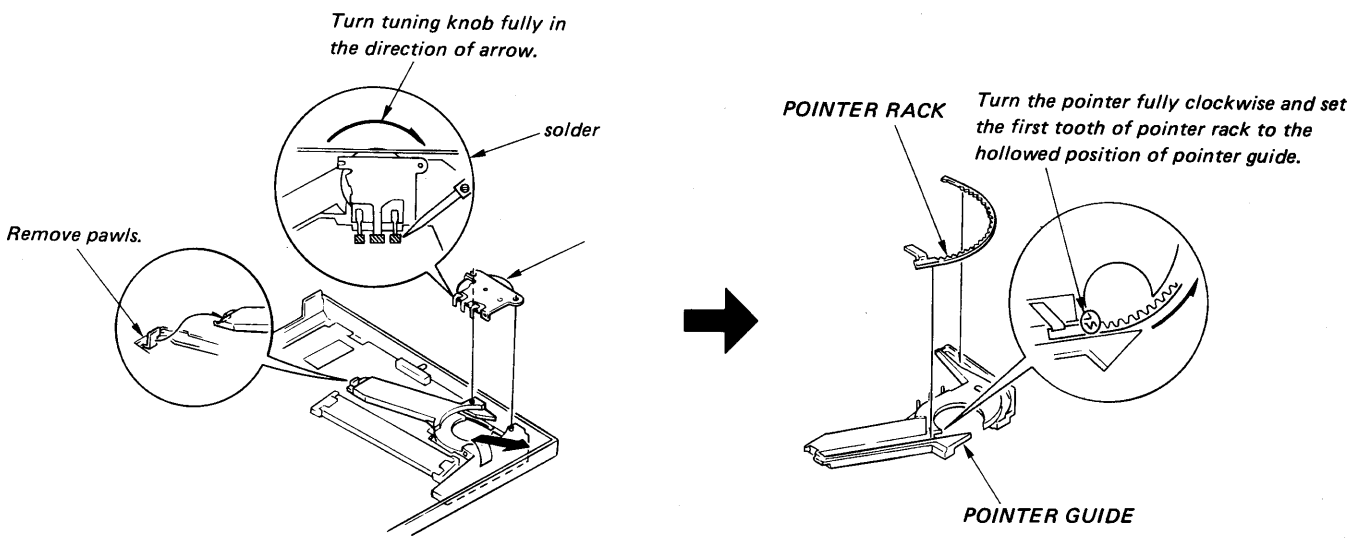
It is easier to install when the tension spring is hooked on the holder guide as illustrated.

TUNER SECTION

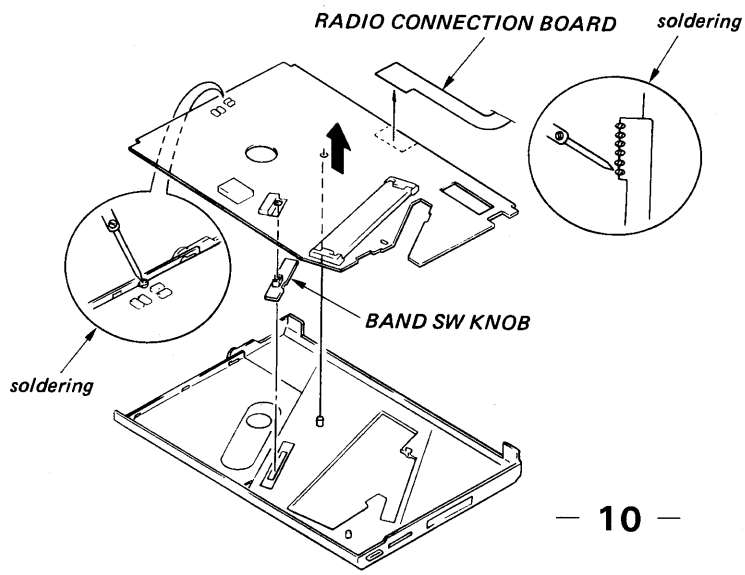
FUNCTION KNOB



POINTER RACK


Turn tuning knob fully in the direction of arrow.
solder
Remove pawls.
POINTER RACK
Turn the pointer fully clockwise and set the first tooth of pointer rack to the hollowed position of pointer guide.
POINTER GUIDE

TUNER BOARD



SECTION 3
ADJUSTMENTS

MECHANICAL ADJUSTMENTS AND MEASUREMENT

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:

   playback head — rubber belts
   capstan — idlers
   pinch roller

2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (1.3V) unless otherwise noted.

Torque Measurement

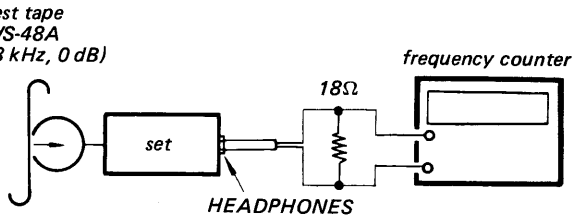
Mode	Torque Meter	Meter Reading
FWD	CQ-102C	23 – 40 g•cm 0.32 – 0.55 oz•inch
FWD Back Tension		1.5 – 3 g•cm 0.02 – 0.04 oz•inch
REV	CQ-102RB	23 – 40 g•cm 0.32 – 0.55 oz•inch
REV Back Tension		1.5 – 3 g•cm 0.02 – 0.04 oz•inch
FF	CQ-201B	more than 60 g•cm more than 0.83 oz•inch
REW		more than 60 g•cm more than 0.83 oz•inch

Tape Pulling Force Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 50 g more than 1.76 oz
REV	CQ-403R	more than 50 g more than 1.76 oz

Tape Speed Adjustment

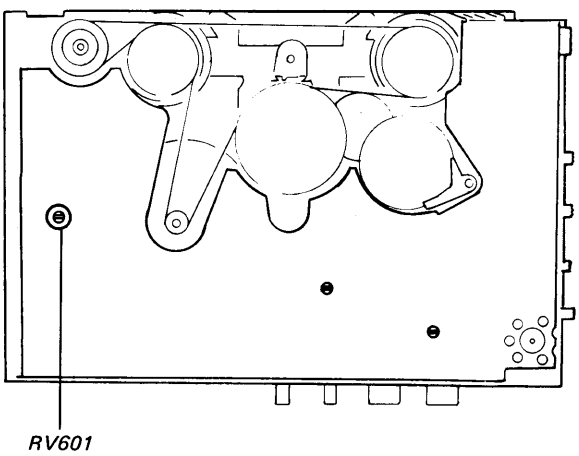
Procedure:



1. Play back WS-48A (Tape center portion) in FWD mode.
   Adjust the RV601 so that the frequency counter reads 3,000 Hz ±10 Hz.
2. Play back WS-48A (Tape center portion) in REV mode.
   Confirm that the reading of frequency counter is within 1.5% from the reading in step 1.

Adjustment Location:

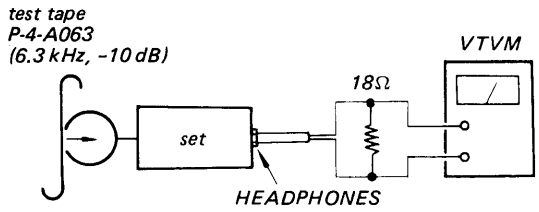
Main Board – Side B –



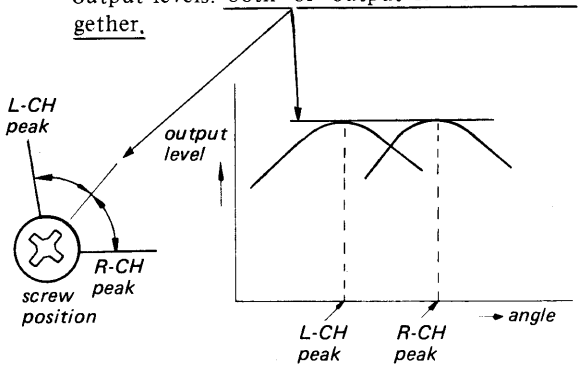
Playback Head Azimuth Adjustment

Procedure:

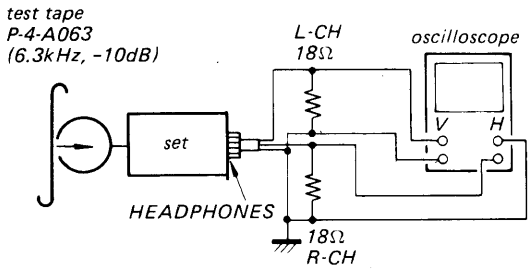
1. Playback mode

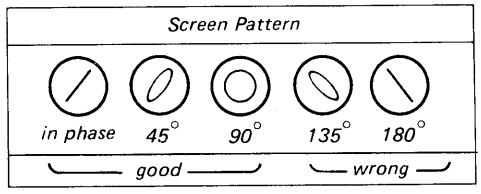


2. Turn the adjustment screw for the maximum output levels. both of output levels match together.



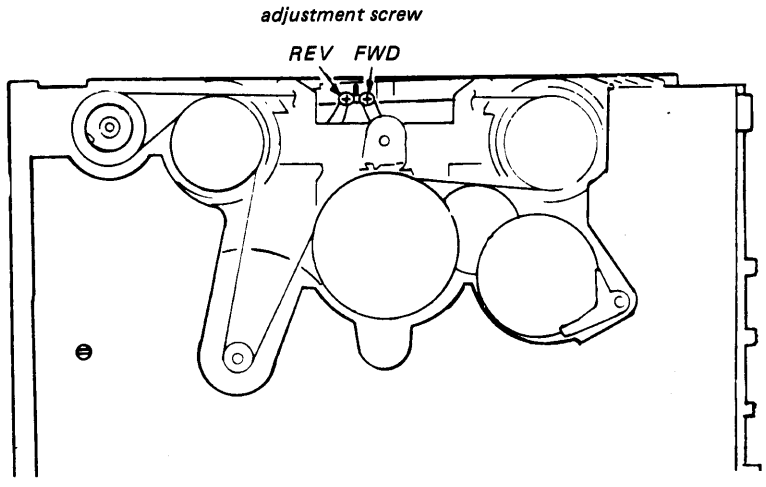
3. Phase Check





4. Press the stop button.
5. Open and close the cassette holder and make sure that playback level does not decrease.
6. Adjustment should be made in both directions of FWD and REV.
   Adjustment screws should be stopped turning in the clockwise direction.
   After the adjustment, lock the screws with locking compound.

Adjustment Location:



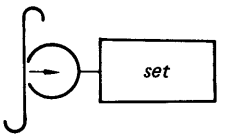
Playback Level Adjustment

DOLBY NR switch . . . . . OFF
VOL knob . . . . . MINIMUM

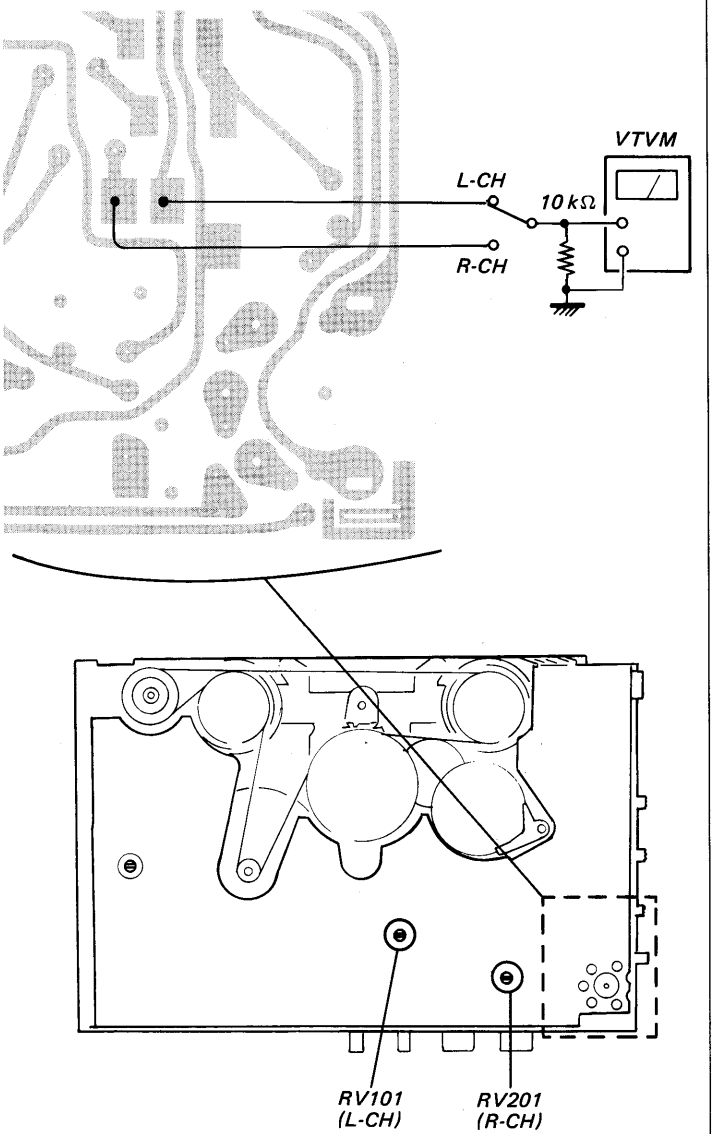
Procedure:

1. Playback mode

test tape
P-4-L300
(315 Hz, 0 dB)



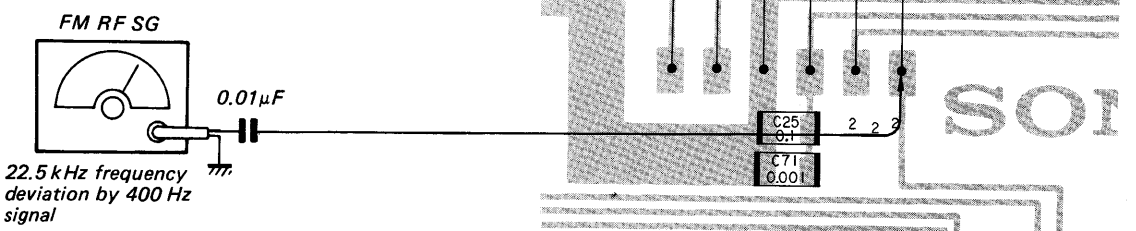
2. Adjust RV101 (L-CH), RV201 (R-CH) so that the VTVM reading is -20.5 ±0.5 dB (0.07 V – 0.077 V).



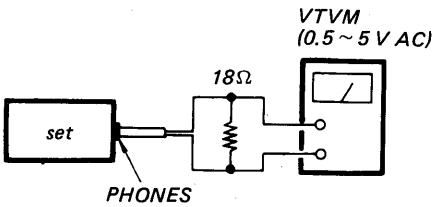
FM Section

Setting:

FUNCTION switch: RADIO, DX
BAND switch: FM



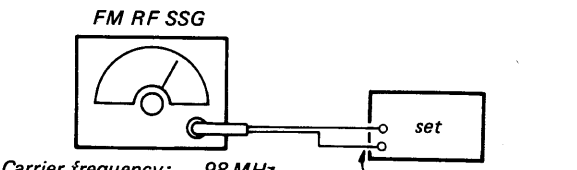
Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.



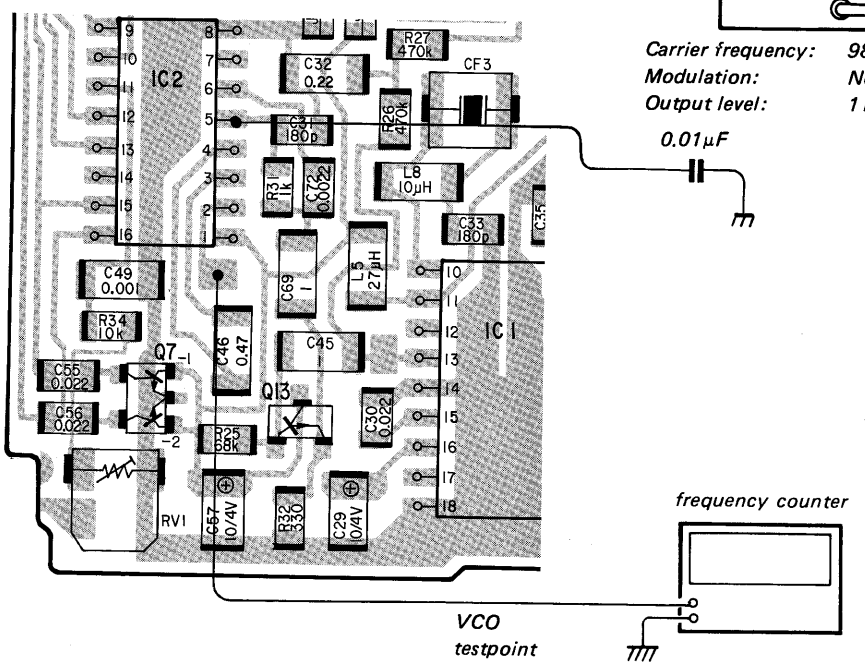
VCO Adjustment

Procedure:

1. Tune the set to 98 MHz
2. Adjust RV1 for 19 kHz ±20 Hz reading on the frequency counter.



[RADIO BOARD]

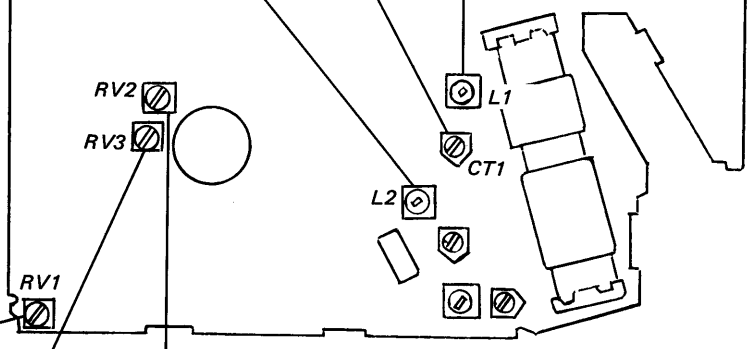


RV1

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum VTVM reading.	
86.5 MHz	109.5 MHz
L2	CT1

FM TRACKING ADJUSTMENT	
Adjust for a maximum VTVM reading.	
L1	86.5 MHz

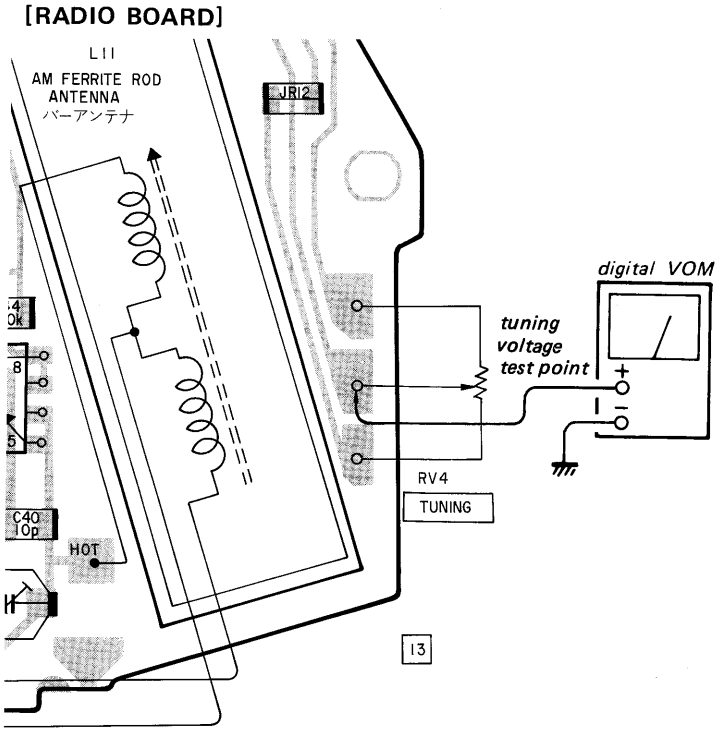
[RADIO BOARD]



RV3	RV2
VOM 1V	VOM 9V
Minimum receiving frequency	Maximum receiving frequency
TUNING VOLTAGE ADJUSTMENT*	

* FM frequency coverage adjustment and the tracking adjustment should be performed after the tuning voltage adjustment.

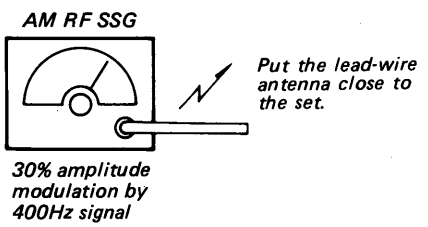
[RADIO BOARD]

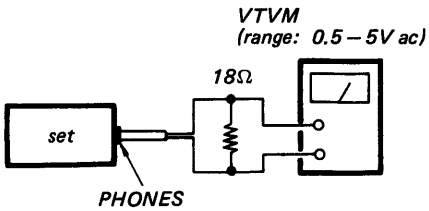


AM Section

Setting:

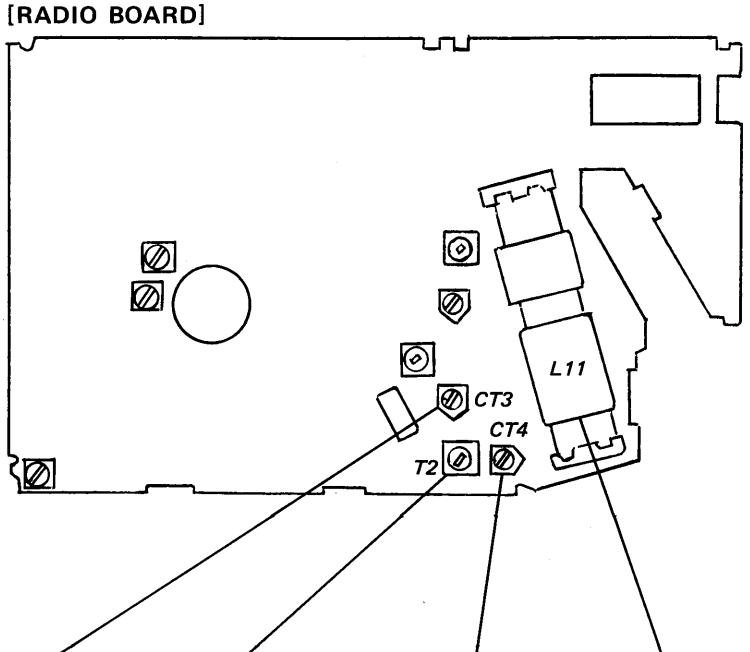
FUNCTION SW: RADIO, DX
BAND SW: AM





Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

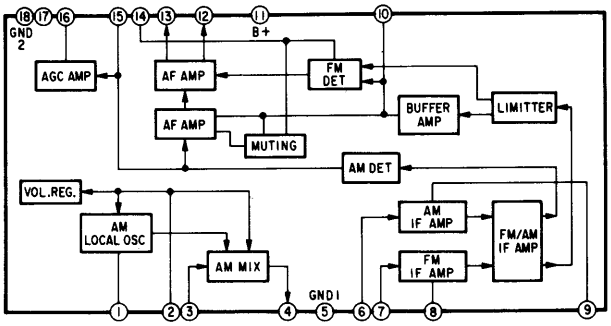
[RADIO BOARD]



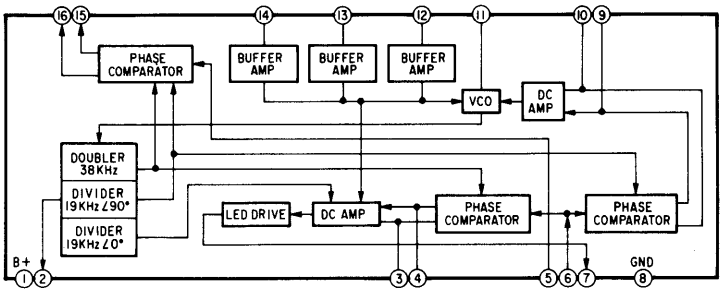
CT3	T2
1,680 kHz	515 kHz
Adjust for a maximum reading on VTVM.	
AM FREQUENCY COVERAGE ADJUSTMENT	

CT4	L11
1,400 kHz	620 kHz
Adjust for a maximum reading on VTVM.	
AM TRACKING ADJUSTMENT	

IC1 CX10053



IC2 CX10054



Note for SCHEMATIC DIAGRAM (Radio Section):

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
  All resistors are in Ω and 1/4W or less unless otherwise specified.
- ⟶ : FM signal path.
- ➡ : AM signal path.
- ▨ : Playback signal path.
  △ : internal component.
- ▬▬ : B+ bus.
- ▭ : adjustment for repair.
- Total current is measured with no cassette installed.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
  (( )) : FM
  << >> : AM
- Voltage variations may be noted due to normal production tolerances.
- Power voltage is 1,5V and fed with regulated dc power supply from BATTERY TERMINAL.
  Voltages are dc with respect to ground in STOP mode.
  Voltage variations may be noted due to normal production tolerances.

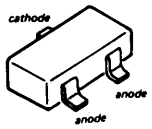
Switches

Ref. N .	Switch	Position
S1	FUNCTION	FM STEREO
S2	BAND	FM

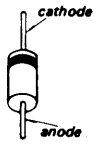
Semiconductor Lead Layouts (Radio board)

2SA812
2SB624-BV4
2SC1623
2SC2223
2SC2714Y
2SC2736
2SC2757
2SD596

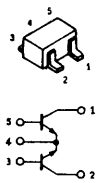
1S2837



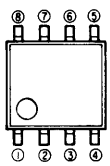
1SS283



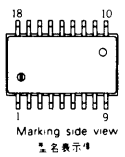
FMG4
TA86E



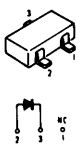
KV1260M



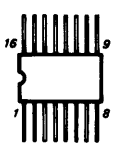
CX10053



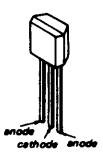
RD10M-B2



CX10054



SVC203



N te f r SCHEMATIC DIAGRAM (Audio Section):

All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.

All resistors are in Ω and 1/8W or less unless otherwise specified.

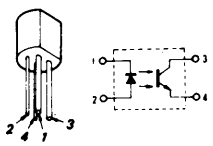
- ⊛ ▬▶▬ : L-CH signal path
- ⊛ ▬▶▬ : R-CH signal path
- ⊛ ▬▬ : B+ bus.
- ⊛ Total current is measured with no cassette installed.
- ⊛ Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
  No mark: PLAY
  ( ) : When the square wave of 20 Hz, 0 dB (0.775 V) is applied to collector of photo transistor (PH701).
- ⊛ Power voltage is 1.5 V and fed with stabilized power supply from DC IN jack.
  Voltages are dc with respect to ground in STOP mode.
- ⊛ Waveforms are taken to ground in no-signal mode by using oscilloscope.
  Voltage variations may be noted due to normal production tolerances.

Switches

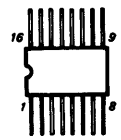
Ref. No.	Switch	Position
S301	FWD/RVS	FWD
S302	TAPE	NORMAL
S303	DOLBY NR	OFF
S701-1	POWER	ON
S701-2	FF/REW	OFF
S702	DIR	OFF

Semiconductor Lead Layouts (Main board)

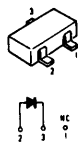
NJL5141E



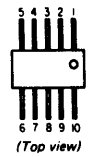
TA7739F



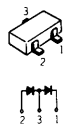
DA106K
RD3.9M-B1



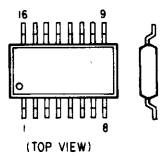
LA4535M



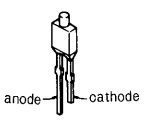
1SS123



NJM2063AM

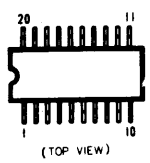


GL2PR9

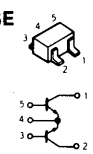


2SA1162
2SB624-BV4
2SC2712
2SD596
DTA114TK
DTC114TK

CX20123



FMG4
FMS1
TA86E



SECTION 4
DIAGRAMS

4-1. MOUNTING DIAGRAM
– Radio Section (FORMER) –

See page 17 for Semiconductor Lead Layouts, IC BLOCK DIAGRAM.

【RADIO BOARD ラジオ基板】

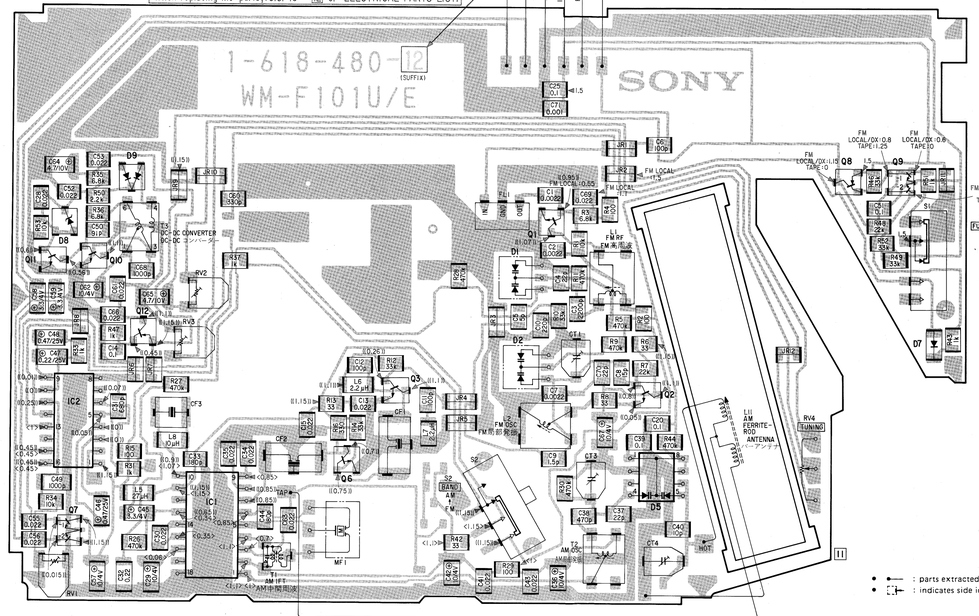
1-618-48012

This MOUNTING DIAGRAM shows RADIO BOARD which part-number suffix of [1] or [2] When replacing the parts, refer to [2] of ELECTRICAL PARTS LIST.

【RADIO FLEXIBLE BOARD ラジオフレキ基板】

TO MAIN BOARD メイン基板へ

L-CH R-CH GND 1.5V Vcc RADIO ON ANT



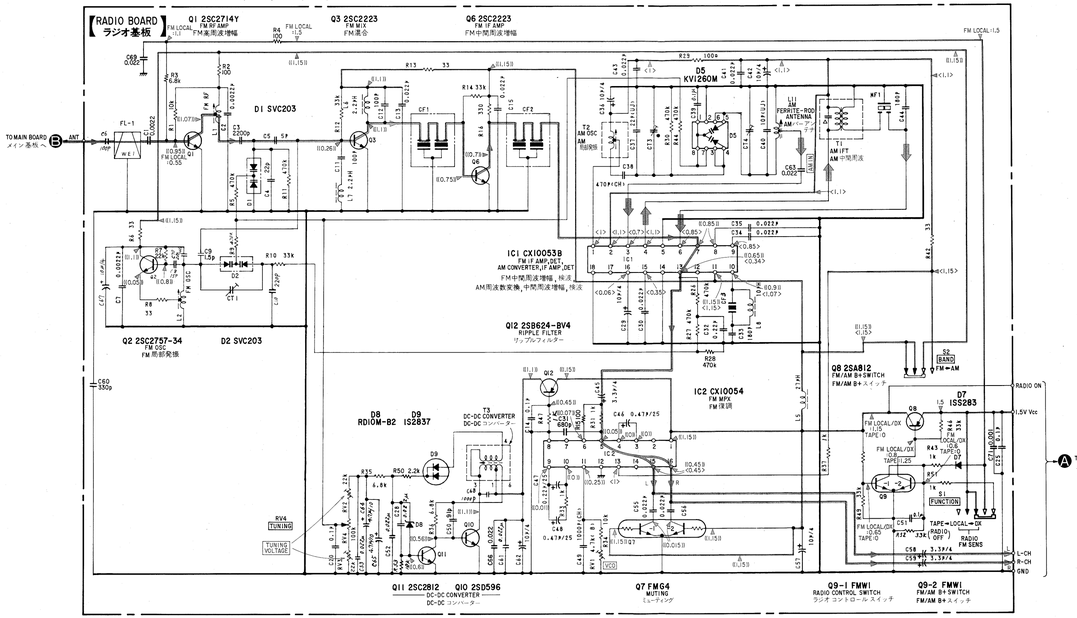
• ●— : parts extracted from the conductor side.
• ⬚ : indicates side identified with part number.

4-3. SCHEMATIC DIAGRAM
– Radio Section (FORMER) –

• See page 17 for Note.

This SCHEMATIC DIAGRAM shows RADIO BOARD which part-number suffix of [1] or [2] When replacing the parts, refer to [2] of the ELECTRICAL PARTS LIST.

【RADIO BOARD ラジオ基板】



4-3. MOUNTING DIAGRAM

– Radio Section (NEW) –

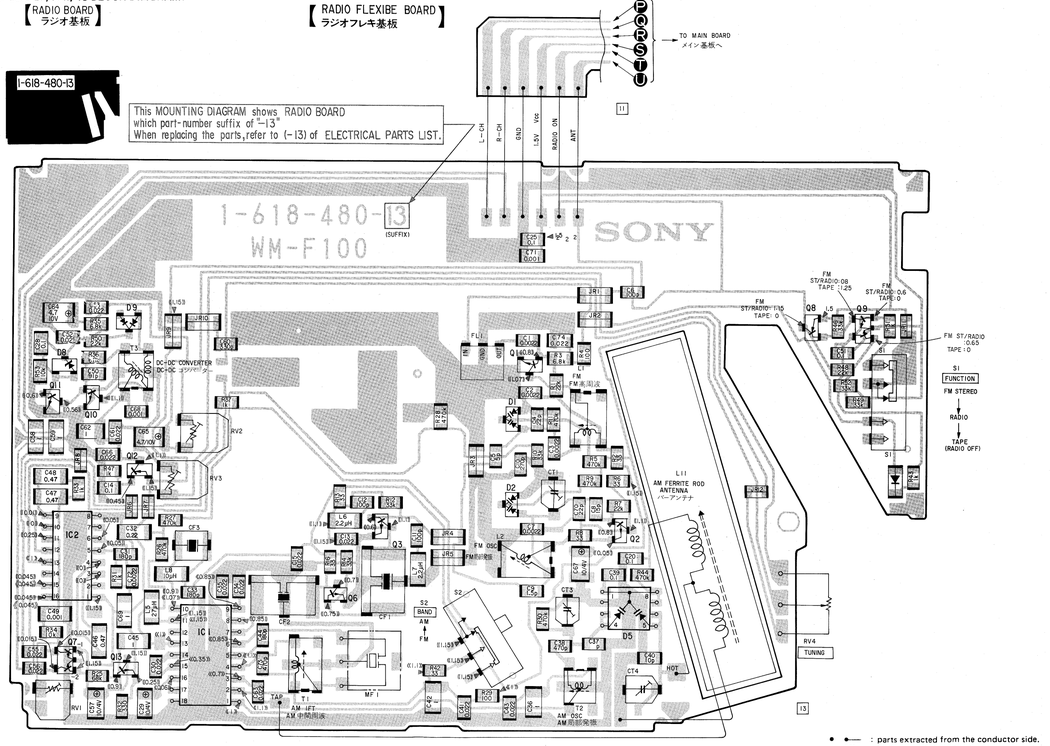
See page 17 for Semiconductor Lead Layouts, IC BLOCK DIAGRAM.

【RADIO BOARD ラジオ基板】

【RADIO FLEXIBE BOARD ラジオフレキ基板】

1-618-480-13

This MOUNTING DIAGRAM shows RADIO BOARD which part-number suffix of "-13". When replacing the parts, refer to (-13) of ELECTRICAL PARTS LIST.



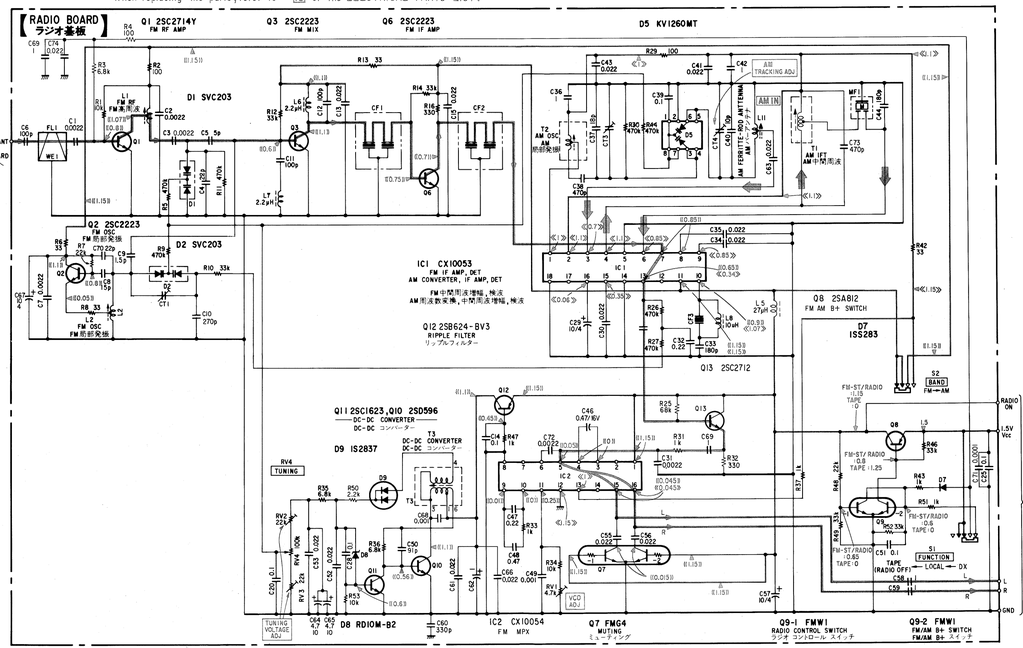
● ⟵ : parts extracted from the conductor side.
● ⟡ : indicates side identified with part number.

4-4. SCHEMATIC DIAGRAM

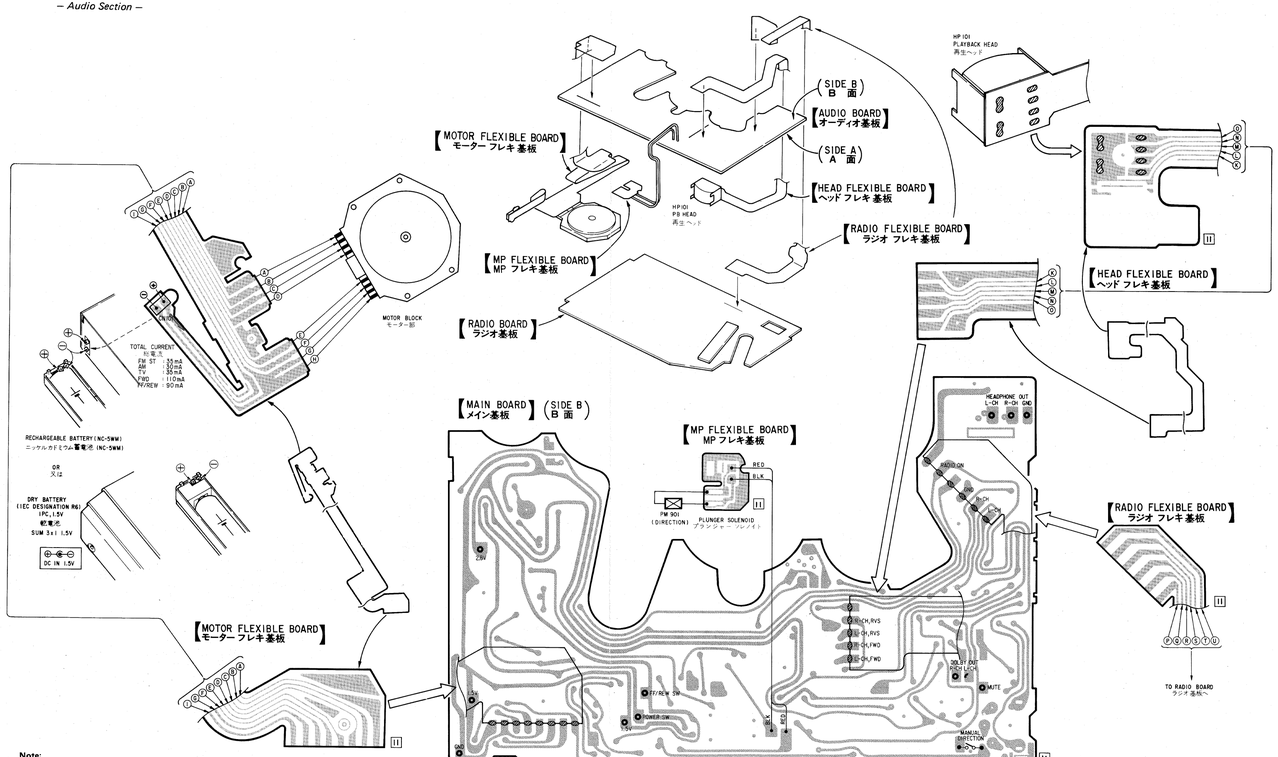
– Radio Section (NEW) –

● See page 17 for Note.

This SCHEMATIC DIAGRAM shows RADIO BOARD which part-number suffix of [13]. When replacing the parts, refer to [13] of the ELECTRICAL PARTS LIST.



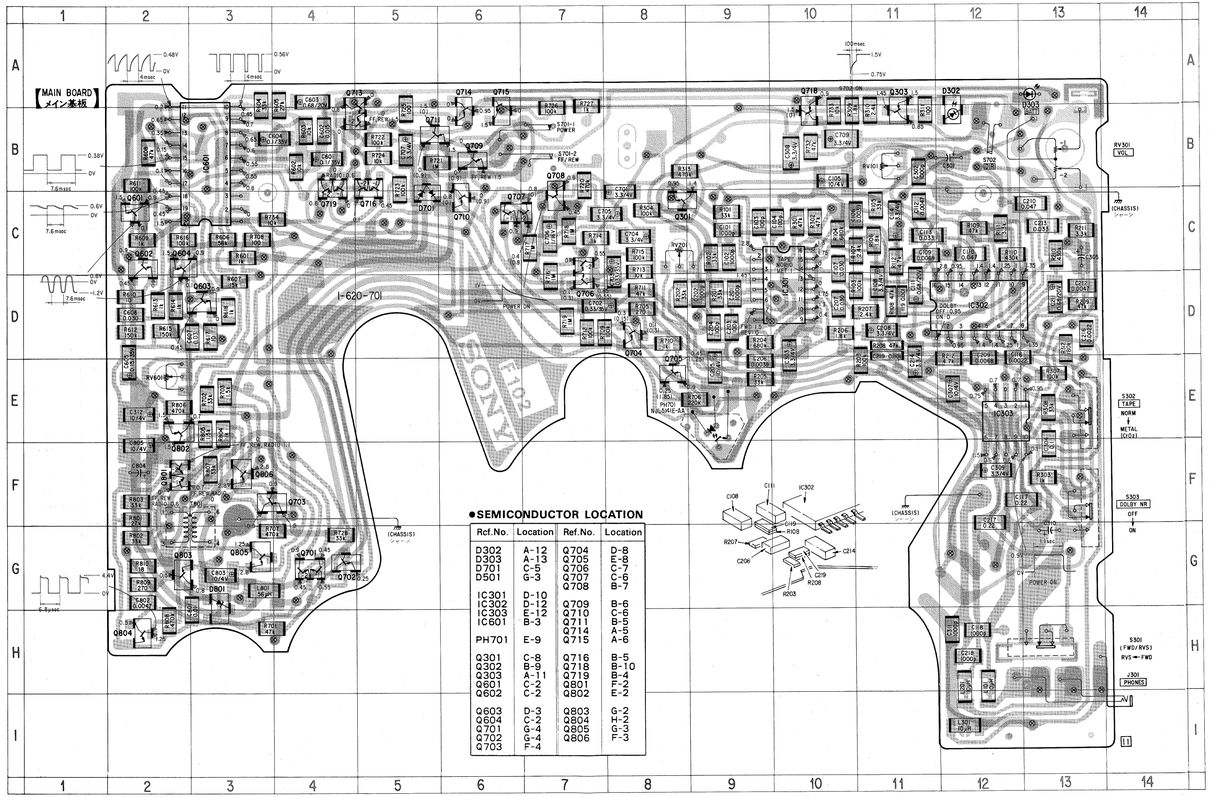
4-4. MOUNTING DIAGRAM
– Audio Section –



Note:
- ●——: parts extracted from the component side.
- ⊗ : Through hole.
- ▪ : component-side pattern.

See page 18 for Semiconductor Lead Layouts and Note.

WM-F100Ⅱ WM-F100Ⅱ



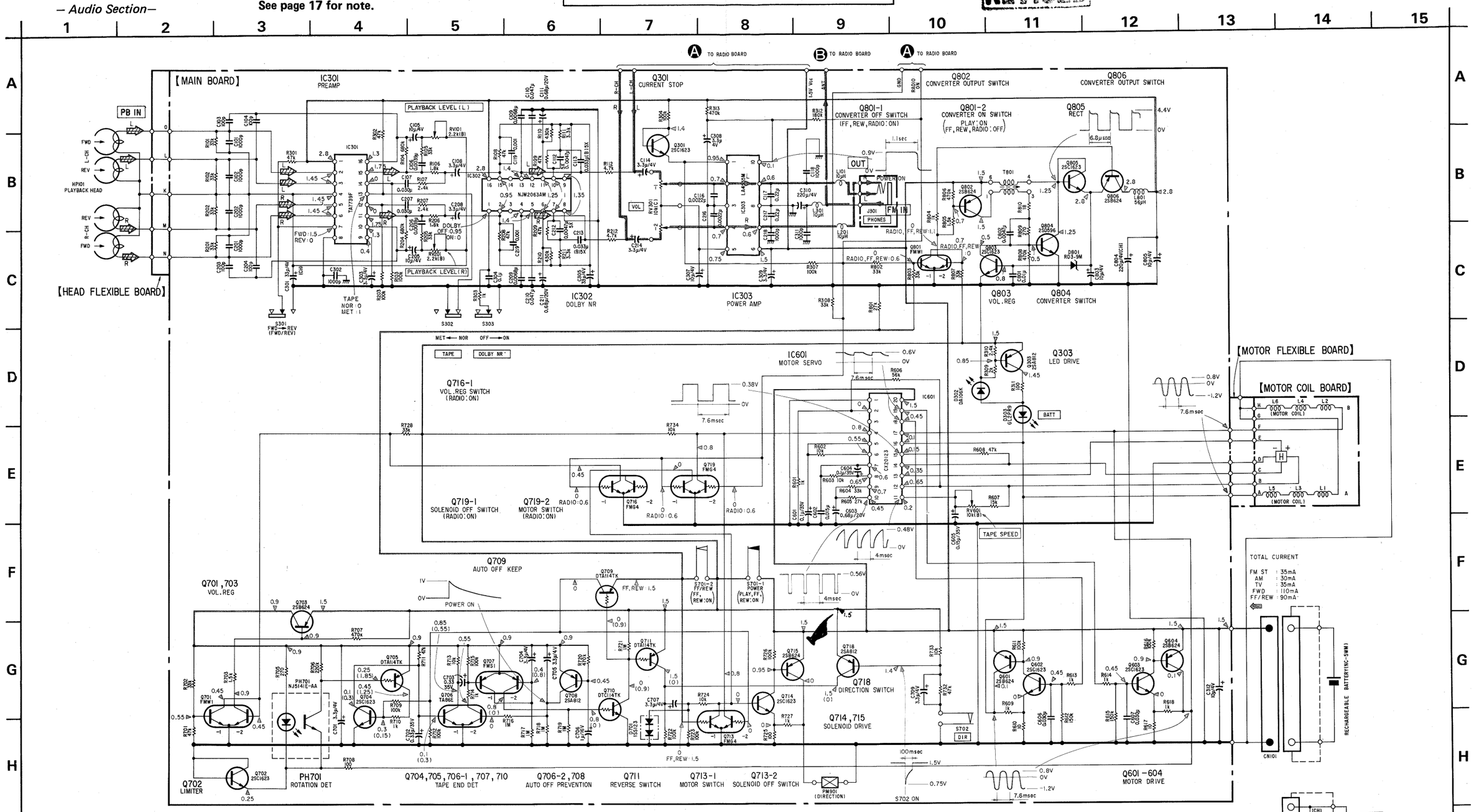
●SEMICONDUCTOR LOCATION

Ref.No.	Location	Ref.No.	Location
D302	A-12	Q704	D-8
D303	A-13	Q705	E-8
D701	C-5	Q706	C-7
D501	G-3	Q707	C-6
		Q708	B-7
IC301	D-10		
IC302	D-12	Q709	B-6
IC303	E-12	Q710	C-6
IC601	B-3	Q711	B-5
		Q714	A-5
PH701	E-9	Q715	A-6
Q301	C-8	Q716	B-5
Q302	B-9	Q718	B-10
Q303	A-11	Q719	B-4
Q601	C-2	Q801	F-2
Q602	C-2	Q802	E-2
Q603	D-3	Q803	G-2
Q604	C-2	Q804	H-2
Q701	G-4	Q805	G-3
Q702	G-4	Q806	F-3
Q703	F-4		

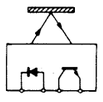
REVISED

4-5. SCHEMATIC DIAGRAM
— Audio Section—

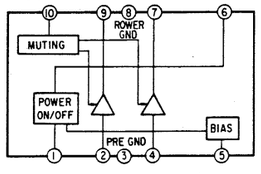
See page 17 for note.



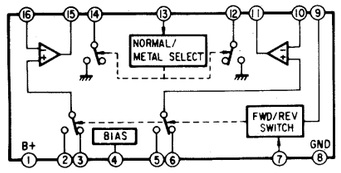
PH701 NJL5141E-AA



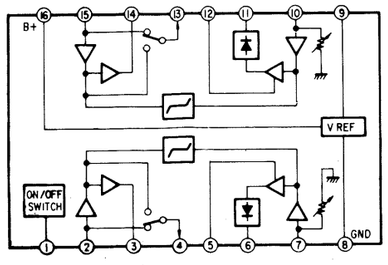
• IC303 LA4535M



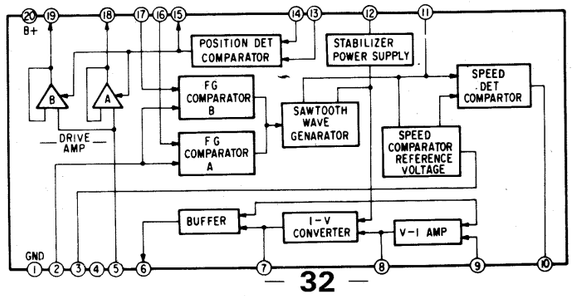
• IC301 TA7739F



• IC302 NJM2063AM



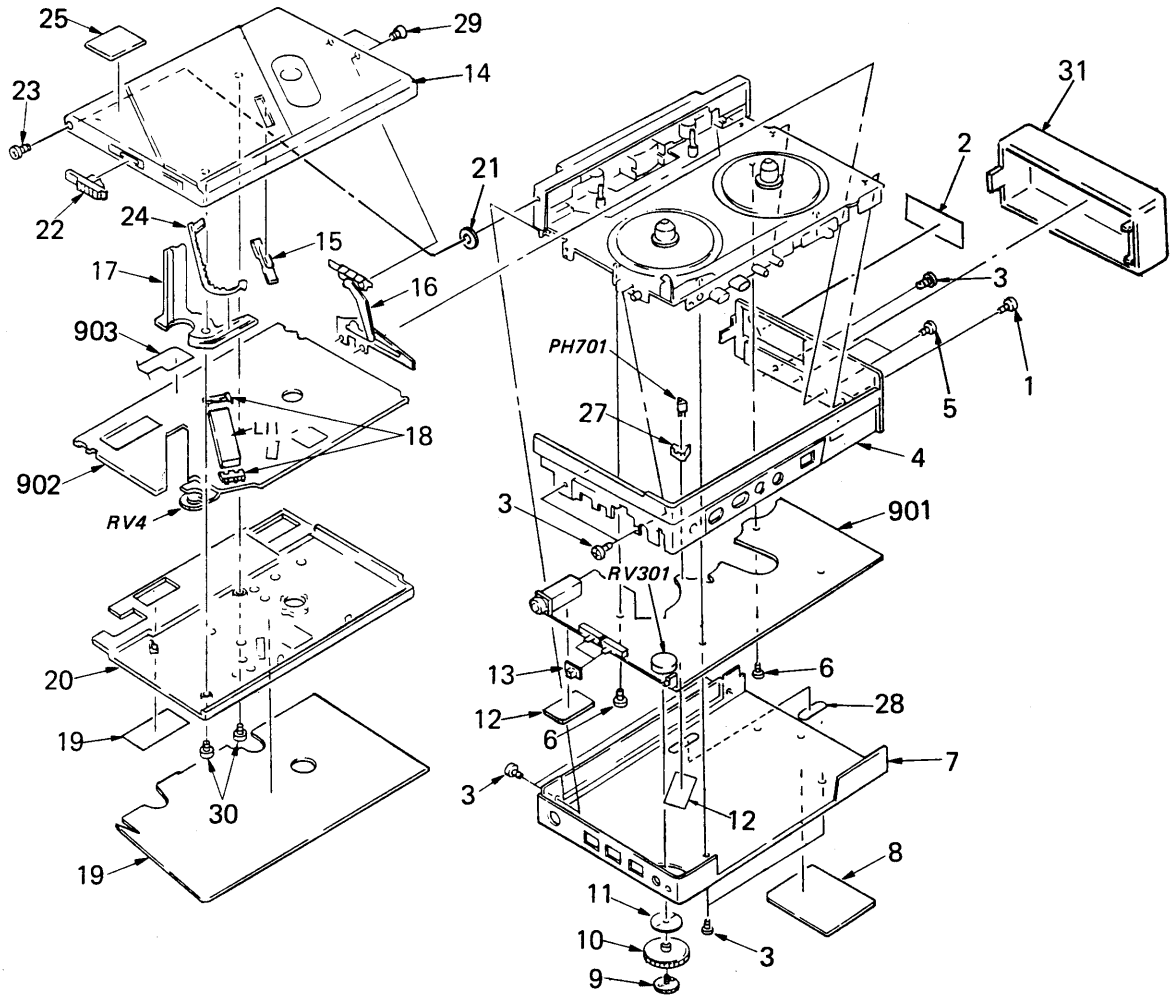
• IC601 CX20123



SECTION 5
EXPLODED VIEWS AND PARTS LIST

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

(1)

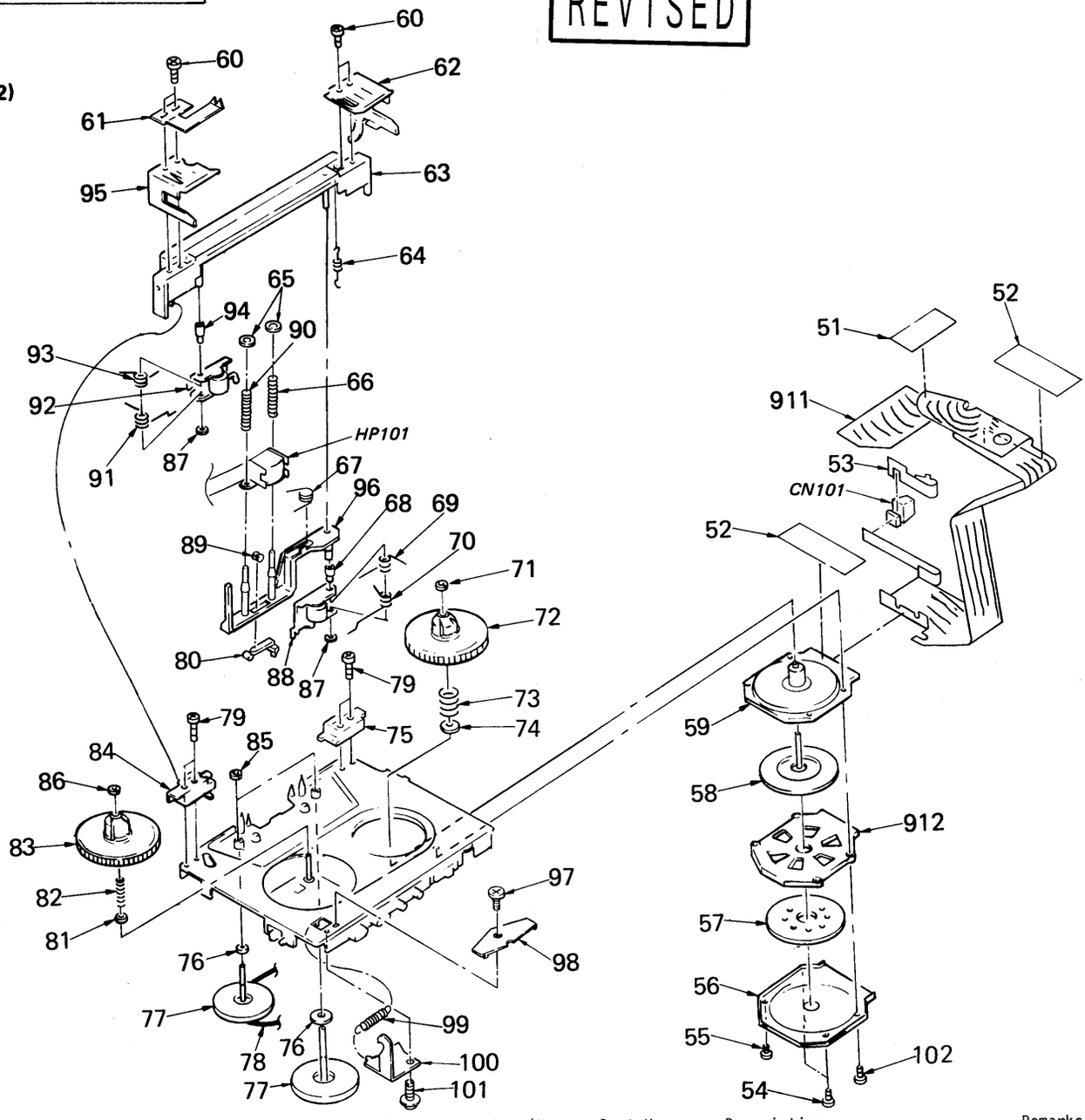


No.	Part No.	Description	Remarks
1	3-704-197-11	SCREW (M1.4X2.0), NYLON	
2	*3-701-999-00	LABEL, SERIAL NUMBER	
3	3-704-197-01	SCREW (M1.4X1.6), NYLON	
4	3-335-952-01	ORNAMENT (F), REEL	
5	3-703-816-31	SCREW (M1.4X1.6), SPECIAL HEAD	
6	3-703-816-01	SCREW (M1.4X2.0), SPECIAL HEAD	
7	X-3329-732-1	(BLACK)PANEL ASSY,CONTROL	
	X-3329-733-1	(SILVER)PANEL ASSY,CONTROL	
8	3-338-621-01	(SILVER)...LABEL, MODEL NUMBER	
	3-338-621-11	(BLACK).....LABEL, MODEL NUMBER	
9	3-315-308-00	SCREW, CONTROL	
10	3-329-767-01	KNOB, VOL	
11	3-315-467-00	WASHER, CONTROL	
12	3-831-441-XX	CUSHION, CABINET UPPER 10X7X0.3	
13	3-329-762-01	KNOB, SW	
14	X-3329-782-1	(BLACK)....PANEL ASSY, CASSETTE	
	X-3329-783-1	(SILVER)...PANEL ASSY, CASSETTE	
15	3-329-747-01	KNOB, BAND SW	
16	X-3329-738-1	BRACKET (T) ASSY, ARM	
17	3-329-757-01	GUIDE, POINTER	
18	3-329-748-01	HOLDER, ANTENNA	

No.	Part No.	Description	Remarks
19	*3-331-021-01	SHEET (A), BLIND	
20	3-329-758-01	PLATE, BLIND, PANEL	
21	3-563-124-11	WASHER, RATTLE ABSORBER	
22	3-329-749-11	KNOB, FUNCTION	
23	3-329-766-01	SCREW (M1.4X2.95),STEP	
24	3-329-753-01	RACK, POINTER	
25	3-703-710-01	STICKER, SONY SYMBOL (12)	
27	3-329-761-01	ADJUSTOR, REFLECTOR	
28	3-333-162-01	SHEET, AZIMUTH HOLE (SILVER)	
	3-333-162-11	SHEET, AZIMUTH HOLE (BLACK)	
29	7-627-451-07	SCREW, PRECISION +K 1.4X1.6	
30	3-703-816-32	SCREW (M1.4X1.6), SPECIAL HEAD	
31	X-3329-740-1	CASE (B) ASSY, R BATTERY (FOR RECHARGEABLE BATTERY)	
901	A-3070-183-A	PC BOARD ASSY, AU	
902	A-3089-238-A	PC BOARD ASSY, TUNER	
903	1-617-100-11	PC BOARD, RADIO CONNECTION	
L11	1-402-182-21	ANTENNA, FERRITE-ROD (MW)	
PH701	8-719-751-43	DIODE NJL5141E-AB	
RV4	1-237-139-11	RES, VAR, CARBON 100K (TUNING)	
RV301	1-230-955-11	RES, VAR, CARBON 10K/10K (VOL)	

REVISED

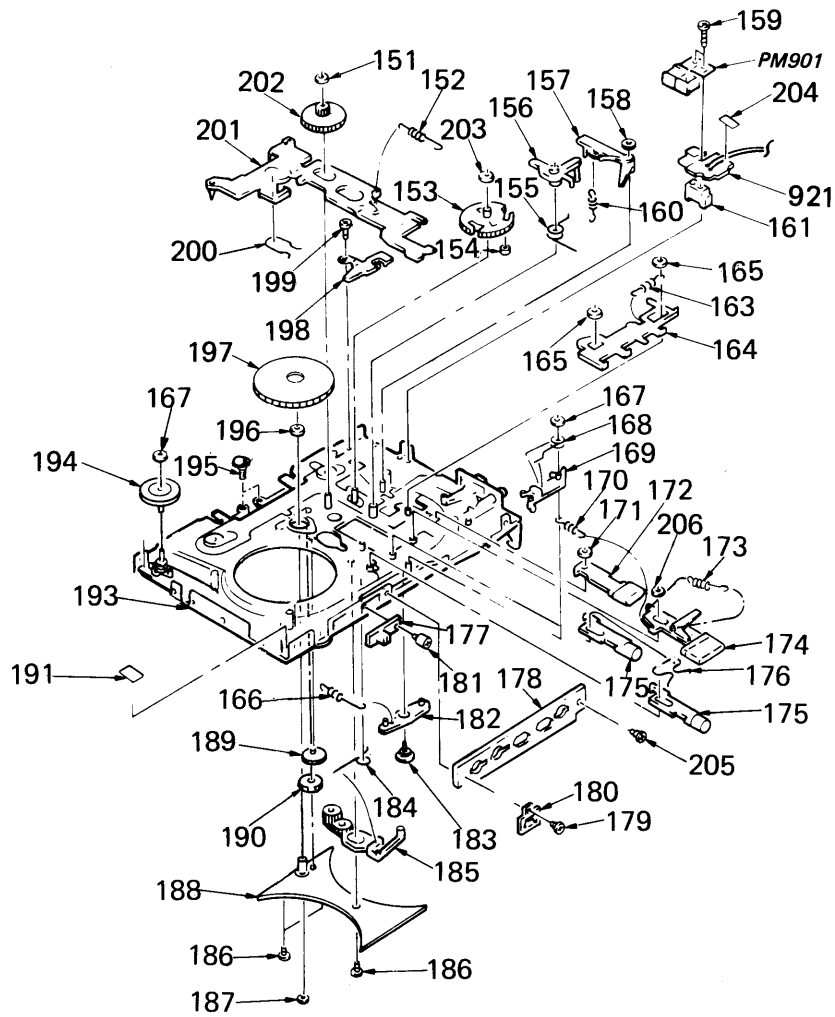
(2)



No.	Part No.	Description	Remarks
51	3-831-441-XX	CUSHION, CABINET UPPER 10X7X0.3	
52	3-703-929-01	SPACER, SWITCH, SHEET PETP (A)	
53	3-335-977-01	SPRING	
54	3-703-816-92	SCREW (M1.4X2.8), SPECIAL HEAD	
55	3-703-816-62	SCREW (M1.4X2.2), SPECIAL HEAD	
56	3-333-126-01	**PLATE(R),SHIELD,MOTOR**	
57	3-333-173-01	**PLATE(S),HYSTERESIS**	
58	A-3133-236-A	WHEEL BLOCK ASSY, MOTOR	
59	X-3329-625-1	CHASSIS ASSY, MOTOR	
60	7-627-551-97	SCREW, PRECISION +P 1.4X2.2	
61	3-331-059-02	SPRING EARTH	
62	3-329-713-01	HOLDER (LEFT), CASSETTE	
63	X-3329-708-1	HOLDER (TD) ASSY	
64	3-331-012-01	**SPRING,(HOLDER),TENSION**	
65	3-335-902-01	**WASHER**	
66	3-337-942-01	SPRING, COMPRESSION	
67	3-337-963-11	SPRING, HEAD LEVER	
68	3-331-027-01	**COLCER(R),PINCH LEVER**	
69	3-329-643-01	SPRING, (R) PINCH LEVER	
70	3-329-641-01	SPRING (R)	
71	3-315-384-11	WASHER, STOPPER (S REEL GEAR DRIVING)	
72	3-329-729-01	GEAR, SUPPLY REEL	
73	3-331-014-01	SPRING COMPRESSION (S REEL)	
74	3-320-354-01	WASHER	
75	3-329-737-01	GUIDE (LEFT), HOLDER	
76	3-321-394-21	WASHER	
77	X-3329-670-1	FLYWHEEL ASSY (N)	
78	3-329-695-01	BELT	
79	7-627-552-48	SCREW, PRECISION +P 1.7X4	
80	3-333-101-01	LEVER AZIMUTH	
81	3-315-414-00	WASHER	

No.	Part No.	Description	Remarks
82	3-331-013-01	SPRING COMPRESSION (T REEL)	
83	X-3329-705-1	GEAR (R) ASSY, T REEL	
84	3-329-736-01	GUIDE (RIGHT), HOLDER	
85	3-331-007-01	WASHER STOPPER	
86	3-578-242-21	WASHER	
87	3-331-036-11	WASHER	
88	X-3329-602-1	PINCH LEVER (R) ASSY	
89	3-333-102-01	SHAFT AZIMUTH	
90	3-337-943-01	SPRING, COMPRESSION	
91	3-329-642-01	SPRING (N)	
92	X-3329-601-1	PINCH LEVER (N) ASSY	
93	3-329-640-01	SPRING (N), PINCH LEVER	
94	3-329-637-01	COLLAR, PINCH LEVER	
95	3-329-714-01	HOLDER (RIGHT), CASSETTE	
96	X-3329-765-1	LEVER ASSY, HEAD	
97	3-333-124-01	SCREW (M1.4), STEP, PRECISION	
98	*3-335-942-01	LEVER (B), EJECT	
99	3-337-964-01	SPRING, TENSION (EJECT LEVER A)	
100	*3-335-943-01	LEVER (A), EJECT	
101	3-703-502-01	SCREW	
102	3-703-816-91	SCREW (M1.4X2.8), SPECIAL HEAD	
911	1-617-017-11	PC BOARD, MOTOR CONNECTION	
912	1-462-230-11	COIL, MOTOR (STATOR)	
CN101	1-506-573-12	CONNECTOR 2P	
HP101	1-543-310-11	HEAD, MAGNETIC (PLAYBACK)	

(3)



No.	Part No.	Description	Remarks
151	3-315-384-11	WASHER, STOPPER	
152	3-337-962-01	SPRING,TENSION (DRIVING LEVER)	
153	3-329-730-01	GEAR, CAM	
154	3-329-693-01	COLLAR, CAM GEAR	
155	3-329-700-01	SPRING, SHUT-OFF LEVER (A)	
156	3-329-733-01	LEVER (A), SHUT-OFF	
157	X-3329-615-1	LEVER ASSY, TRIGGER	
158	3-315-384-21	WASHER, TRIGGER LEVER	
159	7-627-551-37	SCREW, PRECISION +P 1.4X5	
160	3-331-011-01	SPRING (TRIGGER LEVER), TENSION	
161	3-331-041-01	BRACKET, P	
163	3-331-009-01	SPRING (LOCK LEVER), TENSION	
164	3-329-731-01	LEVER, LOCK	
165	3-578-224-01	**WASHER**	
166	3-331-018-01	SPRING, TENSION (DRIVING LEVER B)	
167	3-331-036-11	WASHER	
168	3-329-702-01	SPRING, SW LEVER	
169	3-329-692-05	LEVER, SW	
170	3-331-010-01	SPRING (STOP LEVER, TENSION)	
171	3-578-242-21	WASHER	
172	X-3329-679-1	LEVER ASSY, PLAY	
173	3-331-111-01	SPRING TENSION	
174	X-3329-678-1	LEVER ASSY, STOP	
175	X-3329-696-1	LEVER (A) ASSY, FR	
176	3-331-016-01	SPRING FR	
177	3-329-769-01	**KNOB,SAFETY LOCK**	
178	*3-329-734-01	HOLDER, BUTTON	
179	3-703-816-02	SCREW (M1.4X2.0), SPECIAL HEAD	
180	3-331-043-01	SPRING	

No.	Part No.	Description	Remarks
181	3-329-697-01	SCREW, STEP PRECISION	
182	X-3329-617-1	LEVER (B) ASSY, DRIVING	
183	3-331-056-01	SHAFT, DRIVING LEVER (B)	
184	3-329-699-01	SPRING, RETURN FR LEVER (B)	
185	X-3329-626-1	LEVER (B) ASSY, F.R	
186	3-331-047-01	SCREW (M1.4X1.4), SPECIAL HEAD	
187	3-331-007-01	WASHER STOPPER	
188	X-3329-618-1	COVER ASSY, REEL	
189	3-329-688-01	GEAR (A), T	
190	3-329-689-01	GEAR (B), T	
191	3-327-119-01	SHEET PET P (B)	
193	X-3329-754-1	CHASSIS(A) ASSY	
194	3-329-686-01	WHEEL, REVERSE	
195	3-331-097-01	SCREW AZIMUTH	
196	3-321-394-21	WASHER	
197	X-3329-628-1	PULLEY COMPLETE ASSY, MIDWAY	
198	3-329-685-01	SPRING, (A) NR	
199	3-331-008-01	SCREW (M1.4X1.1)(1), PRECISION	
200	3-329-698-01	SPRING, (B) NR	
201	X-3329-755-1	LEVER (AD) (P) ASSY, DRIVING	
202	3-329-687-01	GEAR, DRIVING	
203	3-578-242-11	WASHER	
204	3-703-929-01	SPACER, SWITCH, SHEET PETP (A)	
205	3-703-816-31	SCREW (M1.4X1.6), SPECIAL HEAD	
206	3-331-036-01	**WASHER**	
921	1-617-019-11	PC BOARD, MP FLEXIBLE	
PM901	1-454-406-11	SOLENOID, PLUNGER	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC,
UPD...: μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
901	A-3070-183-A	PC BOARD ASSY, AU		
902	A-3089-238-A	PC BOARD ASSY, TUNER		
903	1-617-100-11	PC BOARD, RADIO CONNECTION		
911	1-617-017-11	PC BOARD, MOTOR CONNECTION		
912	1-462-230-11	COIL, MOTOR (STATOR)		
921	1-617-019-11	PC BOARD, MP FLEXIBLE		
C1	1-163-013-00	CERAMIC CHIP 0.0022MF	20%	50V
C2	1-163-013-00	CERAMIC CHIP 0.0022MF	20%	50V
C3	1-163-013-00	CERAMIC CHIP 0.0022MF	20%	50V
C4	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C5	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V
C6	1-163-117-00	CERAMIC CHIP 100PF	10%	50V
C7	1-163-013-00	CERAMIC CHIP 0.0022MF	20%	50V
C8	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C9	1-163-084-00	CERAMIC CHIP 1.5PF	0.25PF	50V
C10	1-163-125-00	(-12)...CERAMIC CHIP 220PF	5%	50V
C10	1-163-127-00	(-13)...CERAMIC CHIP 270PF	5%	50V
C11	1-163-117-00	CERAMIC CHIP 100PF	10%	50V
C12	1-163-117-00	CERAMIC CHIP 100PF	10%	50V
C13	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C14	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C15	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C20	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C25	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C28	1-163-033-00	(-12)...CERAMIC CHIP 0.022MF	5%	25V
C28	1-163-038-00	(-13)...CERAMIC CHIP 0.1MF		25V
C29	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C30	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C31	1-163-137-00	(-12)...CERAMIC CHIP 680PF	5%	50V
C31	1-163-123-00	(-13)...CERAMIC CHIP 180PF	5%	50V
C32	1-163-081-00	CERAMIC CHIP 0.22MF		25V
C33	1-163-123-00	CERAMIC CHIP 180PF	5%	50V
C34	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C35	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C36	1-135-104-00	(-12)...TANTAL.CHIP 10MF	10%	4V
C36	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V
C37	1-163-101-00	(-12)...CERAMIC CHIP 22PF	5%	50V
C37	1-163-163-00	(-13)...CERAMIC CHIP 18PF	5%	50V
C38	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C39	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C40	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C41	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C42	1-135-104-00	(-12)...TANTAL.CHIP 10MF	10%	4V
C42	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
C43	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C44	1-163-123-00	CERAMIC CHIP 180PF	5%	50V
C45	1-135-103-00	(-12)...TANTAL.CHIP 3.3MF	10%	4V
C45	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V
C46	1-162-637-11	CERAMIC CHIP 0.47MF		16V
C47	1-163-081-00	CERAMIC CHIP 0.22MF		25V
C48	1-162-637-11	CERAMIC CHIP 0.47MF		16V
C49	1-163-205-00	CERAMIC CHIP 0.001MF	5%	50V
C50	1-163-117-00	(-12)...CERAMIC CHIP 100PF	5%	50V
C50	1-163-116-00	(-13)...CERAMIC CHIP 91PF	5%	50V
C51	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C52	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C53	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C55	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C56	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C57	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C58	1-135-103-00	(-12)...TANTAL.CHIP 3.3MF	10%	4V
C58	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V
C59	1-135-103-00	(-12)...TANTAL.CHIP 3.3MF	10%	4V
C59	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V
C60	1-163-129-00	CERAMIC CHIP 330PF	10%	50V
C61	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C62	1-135-104-00	(-12)...TANTAL.CHIP 10MF	10%	4V
C62	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V
C63	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C64	1-135-096-21	TANTAL. CHIP 4.7MF	10%	10V
C65	1-135-096-21	TANTAL. CHIP 4.7MF	10%	10V
C66	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C67	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C68	1-163-141-00	CERAMIC CHIP 0.001MF	20%	50V
C69	1-163-033-00	(-12)...CERAMIC CHIP 0.022MF	10%	25V
C69	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V
C70	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C72	1-163-013-00	(-13)...CERAMIC CHIP 0.0022MF	20%	50V
C73	1-163-133-00	(-13)...CERAMIC CHIP 470PF	5%	50V
C74	1-163-033-00	(-13)...CERAMIC CHIP 0.022MF	10%	25V
C101	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C102	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C103	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C104	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C105	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C106	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V
C107	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V
C108	1-135-103-00	TANTAL. CHIP 3 3MF	10%	4V
C109	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V

There are three types of RADIO BOARD.
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(-12).....shows part-number suffix of RADIO board -11or-12
(-13).....shows part-number suffix of RADIO board -13

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
C110	1-163-075-00	CERAMIC CHIP 0.047MF	10%	25V
C111	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V
C112	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V
C113	1-163-074-00	CERAMIC CHIP 0.033MF	5%	25V
C114	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C116	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C117	1-163-081-00	CERAMIC CHIP 0.22MF		25V
C118	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C119	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C201	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C202	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C203	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C204	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C205	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C206	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V
C207	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V
C208	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C209	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C210	1-163-075-00	CERAMIC CHIP 0.047MF	10%	25V
C211	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V
C212	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V
C213	1-163-074-00	CERAMIC CHIP 0.033MF	5%	25V
C214	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C216	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C217	1-163-081-00	CERAMIC CHIP 0.22MF		25V
C218	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C219	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C301	1-124-431-00	ELECT 33MF	20%	4V
C302	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C303	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C304	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C305	1-124-431-00	ELECT 33MF	20%	4V
C307	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C308	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C309	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C310	1-124-413-00	ELECT 220MF	20%	4V
C311	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C312	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C601	1-135-070-00	TANTAL. CHIP 0.1MF	10%	35V
C602	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V
C603	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V
C604	1-135-070-00	TANTAL. CHIP 0.1MF	10%	35V
C605	1-135-071-21	TANTAL. CHIP 0.15MF	10%	35V
C606	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V
C607	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V
C701	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C702	1-135-073-00	TANTAL. CHIP 0.33MF	10%	35V
C703	1-135-073-00	TANTAL. CHIP 0.33MF	10%	35V
C704	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C705	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C706	1-135-091-00	TANTAL. CHIP 1MF	10%	16V
C707	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C709	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C801	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C802	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C803	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C804	1-124-413-00	ELECT 220MF	20%	4V
C805	1-135-104-00	TANTAL. CHIP 10MF	10%	4V

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
CF1	1-567-338-65	FILTER, CERAMIC
CF2	1-567-338-65	FILTER, CERAMIC
CF3	1-567-338-65	FILTER, CERAMIC
CN101	1-506-573-12	CONNECTOR 2P
CT1	1-141-333-11	(-12)...CAP, VAR, TRIMMER (CHIP TYPE)
CT1	1-141-313-11	(-13)...CAP, VAR, TRIMMER (CHIP TYPE)
CT3	1-141-333-11	(-12)...CAP, VAR, TRIMMER (CHIP TYPE)
CT3	1-141-313-11	(-13)...CAP, VAR, TRIMMER (CHIP TYPE)
CT4	1-141-333-11	(-12)...CAP, VAR, TRIMMER (CHIP TYPE)
CT4	1-141-313-11	(-13)...CAP, VAR, TRIMMER (CHIP TYPE)
D1	8-719-908-57	DIODE SVC203
D2	8-719-908-57	DIODE SVC203
D5	8-719-928-03	DIODE KV1260
D7	8-719-118-21	DIODE 1SS283
D8	8-719-106-53	DIODE RD10M
D9	8-719-100-05	DIODE 1S2837
D302	8-719-908-30	DIODE DA106K
D303	1-807-305-11	DIODE GL2PR9 (LED)(BATT)
D701	8-719-101-23	DIODE 1SS123
D801	8-719-105-57	DIODE RD3.9M-B1
FL1	1-235-279-00	FILTER, BAND PASS
HP101	1-543-310-11	HEAD, MAGNETIC (PLAYBACK)
IC1	8-759-910-52	IC CX10053
IC2	8-759-913-53	IC CX10054
IC301	8-759-203-85	IC TA7739F
IC302	8-759-701-07	IC NJM2063AM
IC303	8-759-802-80	IC LA4535M
IC601	8-752-012-32	IC CX20123
J301	1-562-974-11	JACK (PHONES)
JR1	1-216-296-00	METAL CHIP 0 5% 1/8W
JR2	1-216-296-00	METAL CHIP 0 5% 1/8W
JR3	1-216-296-00	METAL CHIP 0 5% 1/8W
JR4	1-216-296-00	METAL CHIP 0 5% 1/8W
JR5	1-216-296-00	METAL CHIP 0 5% 1/8W
JR6	1-216-295-00	METAL CHIP 0 5% 1/10W
JR7	1-216-295-00	METAL CHIP 0 5% 1/10W
JR9	1-216-296-00	METAL CHIP 0 5% 1/8W
JR10	1-216-296-00	METAL CHIP 0 5% 1/8W
JR11	1-216-295-00	METAL CHIP 0 5% 1/10W
JR12	1-216-295-00	METAL CHIP 0 5% 1/10W
L1	1-459-641-11	COIL (WITH CORE)
L2	1-459-642-11	COIL (WITH CORE)
L5	1-410-209-51	INDUCTOR CHIP 27UH
L6	1-410-196-11	INDUCTOR CHIP 2.2UH
L7	1-410-196-11	INDUCTOR CHIP 2.2UH
L8	1-410-204-41	INDUCTOR CHIP 10UH
L11	1-402-182-21	ANTENNA, FERRITE-ROD (MW)
L101	1-410-204-41	INDUCTOR CHIP 10UH
L201	1-410-204-41	INDUCTOR CHIP 10UH
L301	1-410-204-41	INDUCTOR CHIP 10UH
L801	1-410-213-51	INDUCTOR CHIP 56UH
MF1	1-567-383-00	(-12)...FILTER, CERAMIC
MF1	1-567-693-11	(-13)...FILTER, CERAMIC
PH701	8-719-751-43	DIODE NJL5141E-AB
PM901	1-454-406-11	SOLENOID, PLUNGER

(-12).....shows part-number suffix of RADIO board -11or-12
(-13).....shows part-numb r suffix of RADIO board -13

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q1	8-729-200-87	TRANSISTOR 2SC2714Y
Q2	8-729-102-23	TRANSISTOR 2SC2757
Q3	8-729-102-06	TRANSISTOR 2SC2223
Q6	8-729-102-06	TRANSISTOR 2SC2223
Q7	8-729-902-93	TRANSISTOR FMG4
Q8	8-729-216-22	TRANSISTOR 2SA1162
Q9	8-729-902-38	TRANSISTOR TA86E
Q10	8-729-159-64	TRANSISTOR 2SD596
Q11	8-729-271-29	TRANSISTOR 2SC2712
Q12	8-729-162-44	TRANSISTOR 2SB624-BV4
Q13	8-729-271-29	(-13)...TRANSISTOR 2SC2712
Q301	8-729-271-29	TRANSISTOR 2SC2712
Q303	8-729-216-22	TRANSISTOR 2SA1162
Q601	8-729-162-44	TRANSISTOR 2SB624-BV4
Q602	8-729-271-29	TRANSISTOR 2SC2712
Q603	8-729-271-29	TRANSISTOR 2SC2712
Q604	8-729-162-44	TRANSISTOR 2SB624-BV4
Q701	8-729-902-38	TRANSISTOR TA86E
Q702	8-729-271-29	TRANSISTOR 2SC2712
Q703	8-729-162-44	TRANSISTOR 2SB624-BV4
Q704	8-729-271-29	TRANSISTOR 2SC2712
Q705	8-729-900-51	TRANSISTOR DTA114TK
Q706	8-729-902-38	TRANSISTOR TA86E
Q707	8-729-902-96	TRANSISTOR FMS1
Q708	8-729-216-22	TRANSISTOR 2SA1162
Q709	8-729-900-51	TRANSISTOR DTA114TK
Q710	8-729-902-99	TRANSISTOR DTC114TK
Q711	8-729-900-51	TRANSISTOR DTA114TK
Q713	8-729-902-93	TRANSISTOR FMG4
Q714	8-729-271-29	TRANSISTOR 2SC2712
Q715	8-729-162-44	TRANSISTOR 2SB624-BV4
Q716	8-729-902-93	TRANSISTOR FMG4
Q718	8-729-216-22	TRANSISTOR 2SA1162
Q719	8-729-902-93	TRANSISTOR FMG4
Q801	8-729-902-38	TRANSISTOR TA86E
Q802	8-729-162-44	TRANSISTOR 2SB624-BV4
Q803	8-729-271-29	TRANSISTOR 2SC2712
Q804	8-729-159-64	TRANSISTOR 2SD596
Q805	8-729-271-29	TRANSISTOR 2SC2712
Q806	8-729-162-44	TRANSISTOR 2SB624-BV4
R1	1-216-073-00	METAL CHIP 10K 5% 1/10W
R2	1-216-025-00	METAL CHIP 100 5% 1/10W
R3	1-216-069-00	METAL CHIP 6.8K 5% 1/10W
R4	1-216-025-00	METAL CHIP 100 5% 1/10W
R5	1-216-113-00	METAL CHIP 470K 5% 1/10W
R6	1-216-013-00	METAL CHIP 33 5% 1/10W
R7	1-216-081-00	METAL CHIP 22K 5% 1/10W
R8	1-216-013-00	METAL CHIP 33 5% 1/10W
R9	1-216-113-00	METAL CHIP 470K 5% 1/10W
R10	1-216-085-00	METAL CHIP 33K 5% 1/10W
R11	1-216-113-00	METAL CHIP 470K 5% 1/10W
R12	1-216-085-00	METAL CHIP 33K 5% 1/10W
R13	1-216-013-00	METAL CHIP 33 5% 1/10W
R14	1-216-085-00	METAL CHIP 33K 5% 1/10W
R15	1-216-025-00	(-12)...METAL CHIP 100 5% 1/10W
R16	1-216-037-00	METAL CHIP 330 5% 1/10W
R25	1-216-093-00	(-13)...METAL CHIP 68K 5% 1/10W
R26	1-216-113-00	METAL CHIP 470K 5% 1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R27	1-216-113-00	METAL CHIP 470K 5% 1/10W
R28	1-216-113-00	METAL CHIP 470K 5% 1/10W
R29	1-216-025-00	METAL CHIP 100 5% 1/10W
R30	1-216-113-00	METAL CHIP 470K 5% 1/10W
R31	1-216-049-00	METAL CHIP 1K 5% 1/10W
R32	1-216-037-00	(-13)...METAL CHIP 330 5% 1/10W
R33	1-216-049-00	METAL CHIP 1K 5% 1/10W
R34	1-216-073-00	METAL CHIP 10K 5% 1/10W
R35	1-216-069-00	METAL CHIP 6.8K 5% 1/10W
R36	1-216-069-00	METAL CHIP 6.8K 5% 1/10W
R37	1-216-049-00	METAL CHIP 1K 5% 1/10W
R42	1-216-013-00	METAL CHIP 33 5% 1/10W
R43	1-216-049-00	METAL CHIP 1K 5% 1/10W
R44	1-216-113-00	METAL CHIP 470K 5% 1/10W
R46	1-216-085-00	METAL CHIP 33K 5% 1/10W
R47	1-216-049-00	METAL CHIP 1K 5% 1/10W
R48	1-216-081-00	METAL CHIP 22K 5% 1/10W
R49	1-216-085-00	METAL CHIP 33K 5% 1/10W
R50	1-216-049-00	(-12)...METAL CHIP 1K 5% 1/10W
R50	1-216-057-00	(-13)...METAL CHIP 2.2K 5% 1/10W
R51	1-216-049-00	METAL CHIP 1K 5% 1/10W
R52	1-216-085-00	METAL CHIP 33K 5% 1/10W
R53	1-216-073-00	METAL CHIP 10K 5% 1/10W
R101	1-216-085-00	METAL CHIP 33K 5% 1/10W
R102	1-216-085-00	METAL CHIP 33K 5% 1/10W
R103	1-216-097-00	METAL CHIP 100K 5% 1/10W
R104	1-216-117-00	METAL CHIP 680K 5% 1/10W
R105	1-216-085-00	METAL CHIP 33K 5% 1/10W
R106	1-216-055-00	METAL CHIP 1.8K 5% 1/10W
R107	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R108	1-216-089-00	METAL CHIP 47K 5% 1/10W
R109	1-216-089-00	METAL CHIP 47K 5% 1/10W
R110	1-216-112-00	METAL CHIP 430K 5% 1/10W
R111	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R112	1-216-065-00	METAL CHIP 4.7K 5% 1/10W
R201	1-216-085-00	METAL CHIP 33K 5% 1/10W
R202	1-216-085-00	METAL CHIP 33K 5% 1/10W
R203	1-216-097-00	METAL CHIP 100K 5% 1/10W
R204	1-216-117-00	METAL CHIP 680K 5% 1/10W
R205	1-216-085-00	METAL CHIP 33K 5% 1/10W
R206	1-216-055-00	METAL CHIP 1.8K 5% 1/10W
R207	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R208	1-216-089-00	METAL CHIP 47K 5% 1/10W
R209	1-216-089-00	METAL CHIP 47K 5% 1/10W
R210	1-216-112-00	METAL CHIP 430K 5% 1/10W
R211	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R212	1-216-065-00	METAL CHIP 4.7K 5% 1/10W
R301	1-216-089-00	METAL CHIP 47K 5% 1/10W
R302	1-216-089-00	METAL CHIP 47K 5% 1/10W
R303	1-216-049-00	METAL CHIP 1K 5% 1/10W
R304	1-216-097-00	METAL CHIP 100K 5% 1/10W
R307	1-216-097-00	METAL CHIP 100K 5% 1/10W
R308	1-216-085-00	METAL CHIP 33K 5% 1/10W
R309	1-216-056-00	METAL CHIP 2K 5% 1/10W
R310	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R311	1-216-025-00	METAL CHIP 100 5% 1/10W

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(-13).....shows part-number suffix of RADIO board -13

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R312	1-216-103-00	METAL CHIP	180K	5%	1/10W
R313	1-216-113-00	METAL CHIP	470K	5%	1/10W
R601	1-216-049-00	METAL CHIP	1K	5%	1/10W
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-216-073-00	METAL CHIP	10K	5%	1/10W
R604	1-216-085-00	METAL CHIP	33K	5%	1/10W
R605	1-216-083-00	METAL CHIP	27K	5%	1/10W
R606	1-216-091-00	METAL CHIP	56K	5%	1/10W
R607	1-216-077-00	METAL CHIP	15K	5%	1/10W
R608	1-216-089-00	METAL CHIP	47K	5%	1/10W
R609	1-216-049-00	METAL CHIP	1K	5%	1/10W
R610	1-216-001-00	METAL CHIP	10	5%	1/10W
R611	1-216-097-00	METAL CHIP	100K	5%	1/10W
R612	1-216-101-00	METAL CHIP	150K	5%	1/10W
R613	1-216-049-00	METAL CHIP	1K	5%	1/10W
R614	1-216-049-00	METAL CHIP	1K	5%	1/10W
R615	1-216-101-00	METAL CHIP	150K	5%	1/10W
R616	1-216-097-00	METAL CHIP	100K	5%	1/10W
R617	1-216-001-00	METAL CHIP	10	5%	1/10W
R618	1-216-049-00	METAL CHIP	1K	5%	1/10W
R701	1-216-089-00	METAL CHIP	47K	5%	1/10W
R702	1-216-085-00	METAL CHIP	33K	5%	1/10W
R703	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R705	1-216-035-00	METAL CHIP	270	5%	1/10W
R706	1-216-105-00	METAL CHIP	220K	5%	1/10W
R707	1-216-113-00	METAL CHIP	470K	5%	1/10W
R708	1-216-025-00	METAL CHIP	100	5%	1/10W
R709	1-216-097-00	METAL CHIP	100K	5%	1/10W
R710	1-216-049-00	METAL CHIP	1K	5%	1/10W
R711	1-216-089-00	METAL CHIP	47K	5%	1/10W
R712	1-216-097-00	METAL CHIP	100K	5%	1/10W
R713	1-216-073-00	METAL CHIP	10K	5%	1/10W
R714	1-216-049-00	METAL CHIP	1K	5%	1/10W
R715	1-216-097-00	METAL CHIP	100K	5%	1/10W
R716	1-216-121-00	METAL CHIP	1M	5%	1/10W
R717	1-216-121-00	METAL CHIP	1M	5%	1/10W
R718	1-216-121-00	METAL CHIP	1M	5%	1/10W
R719	1-216-121-00	METAL CHIP	1M	5%	1/10W
R720	1-216-113-00	METAL CHIP	470K	5%	1/10W
R721	1-216-121-00	METAL CHIP	1M	5%	1/10W
R722	1-216-097-00	METAL CHIP	100K	5%	1/10W
R723	1-216-097-00	METAL CHIP	100K	5%	1/10W
R724	1-216-073-00	METAL CHIP	10K	5%	1/10W
R725	1-216-025-00	METAL CHIP	100	5%	1/10W
R726	1-216-097-00	METAL CHIP	100K	5%	1/10W
R727	1-216-049-00	METAL CHIP	1K	5%	1/10W
R728	1-216-085-00	METAL CHIP	33K	5%	1/10W
R732	1-216-089-00	METAL CHIP	47K	5%	1/10W
R733	1-216-073-00	METAL CHIP	10K	5%	1/10W
R734	1-216-073-00	METAL CHIP	10K	5%	1/10W
R801	1-216-083-00	METAL CHIP	27K	5%	1/10W
R802	1-216-085-00	METAL CHIP	33K	5%	1/10W
R803	1-216-085-00	METAL CHIP	33K	5%	1/10W
R804	1-216-049-00	METAL CHIP	1K	5%	1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R805	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R806	1-216-113-00	METAL CHIP	470K	5%	1/10W
R807	1-216-085-00	METAL CHIP	33K	5%	1/10W
R808	1-216-113-00	METAL CHIP	470K	5%	1/10W
R809	1-216-035-00	METAL CHIP	270	5%	1/10W
R810	1-216-007-00	METAL CHIP	18	5%	1/10W
RV1	1-230-989-11	RES, ADJ, METAL GLAZE 4.7K (VCO)			
RV2	1-230-991-11	RES, ADJ, METAL GLAZE 22K (TUN.ADJ.HI)			
RV3	1-230-991-11	RES, ADJ, METAL GLAZE 22K (TUN.ADJ.LO)			
RV4	1-237-139-11	RES, VAR, CARBON 100K (TUNING)			
RV101	1-237-002-11	RES, ADJ, METAL GLAZE 2.2K (L LEVEL)			
RV201	1-237-002-11	RES, ADJ, METAL GLAZE 2.2K (R LEVEL)			
RV301	1-230-955-11	RES, VAR, CARBON 10K/10K (VOL)			
RV601	1-237-004-11	RES, ADJ, METAL GLAZE 10K (TAPE SPEED)			
S1	1-570-402-11	SWITCH, SLIDE (FUNCTION)			
S2	1-570-397-11	SWITCH, SLIDE (BAND)			
S301	1-570-396-11	SWITCH, SLIDE (FWD/RVS)			
S302	1-570-397-11	SWITCH, SLIDE (TAPE)			
S303	1-570-397-11	SWITCH, SLIDE (DOLBY NR)			
S701	1-570-548-11	SWITCH, LEAF (POWER)(FF/REW)			
S702	1-570-395-11	SWITCH, LEAF (DIR)			
T1	1-404-583-11	(-12)...IFT			
T1	1-404-690-11	(-13)...TRANSFORMER, IF			
T2	1-406-177-11	COIL			
T3	1-448-302-11	TRANSFORMER, DC-DC CONVERTER			
T801	1-447-864-11	TRANSFORMER, DC-DC CONVERTER			

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-528-176-11	BATTERY, STORAGE (NC-5WM)
1-528-221-11	BATTERY CHARGER (BC-7F)
3-335-959-01	CUSHION
3-335-960-01	LID, CUSHION
3-335-961-01	SPACER
3-335-973-01	INDIVIDUAL CARTON
3-337-974-01	CASE, CARRYING
3-701-622-00	BAG, POLYETHYLENE
3-703-895-01	LABEL, COLOR (BLACK)
3-703-906-01	LABEL, COLOR (SILVER)
3-704-086-01	LABEL (BLACK), GENERAL DISCERN
3-704-087-01	LABEL (SILVER), GENERAL DISCERN
3-765-699-11	MANUAL, INSTRUCTION
3-795-748-21	SAFETY INSTRUCTIONS, HEADPHONE
8-952-266-94	HEADPHONE MDR-A10L/B SET
X-3329-739-1	CASE (B) ASSY, BATTERY (FOR DRY BATTERY)

There are three types of RADIO BOARD.
When repairing. verify the part-number suffix refer to MOUNTING DAIGRAM.

(-12).....shows part-numb r suffix of RADIO board -11or-12
(-13).....shows part-number suffix of RADIO board -13

9-952-525-11
(Including 9-952-525-91, -92)

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Audio Group

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